Lumleian Lectures
ON
URIC ACID: ITS PHYSIOLOGY AND ITS RELATION TO RENAL CALCULI AND GRAVEL.

Delivered before the Royal College of Physicians,

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LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—Having stated in the former lecture my views as to the production of uric acid in the animal economy, reserving only certain points to be discussed as we proceed, and having shown that the difficulties which beset the theory that the kidneys are nothing more than the strainers-off of this principle are extremely great, if not insuperable, and that therefore there is no little probability that uric acid is a true product of the renal organs themselves, I will direct attention to the subject of human urine, and the alterations which it undergoes under certain conditions, which lead to the production of those morbid formations commonly called gravel and calculi.

Healthy urine, omitting the trace of mucoid matter contained in it, which consists of the débris or washings from the mucous membrane of the urinary tract, it is well known, is a perfectly clear fluid. Its weight varies much within the limits of health, according to the ratio between the dissolved solids and the water; a specific gravity of 1020 may be taken as the average. Its reaction is decidedly acid, but the amount of its acidity depends on the time of its excretion, especially in relation to food; at times the urine may, for a short period, become neutral, or even alkaline. Healthy human urine consists of water, holding in solution both organic and inorganic principles; the former are, urea, uric, and hippuric acid; the latter, chlorides of different metals, especially sodium, and phosphates of sodium, magnesium, and calcium.

It is to uric acid that we must chiefly direct attention; and I must endeavour to show (1) in what state of chemical combination it exists in the urine; (2) why it is held in solution in an acid fluid; (3) what are the causes which lead to its precipitation from the urine; and (4) what are the different shapes which it assumes when it is thus precipitated from its state of solution.

1. At the present day I believe it may be asserted that uric acid, when in solution, is combined chiefly with sodium, but that there are also varying quantities of other bases present, depending on the amounts of different salts contained in the urine. I have already shown that when urate of ammonium is dissolved in blood serum in which the soda salts are present, it is converted into urate of sodium; and, bearing this fact in mind, we can explain the discrepancies which are found in the different analyses of urate deposits, both in health and disease. I may, however, say that the deposit which until recently was commonly called lithate of ammonia is composed almost entirely, in healthy urine, of urate of sodium. If, however, the urine at any time becomes ammoniacal from the decomposition of the contained urea, then the uric acid, meeting with a large excess of the new-formed base, gets deposited as urate of ammonium, a salt which is very insoluble.

2. The next point to be considered is the reason of its existence as urate of sodium in a fluid having such a well-marked acid reaction as healthy urine. This fact was for a long time difficult of explanation; but Liebig showed that if to a warm solution of the common phosphate of sodium, which has an alkaline reaction, uric acid be added till it no longer dissolves, the solution becomes strongly acid, and there is contained in it urate of sodium and the acid phosphate of sodium, which latter salt exhibits a full acid reaction, but does not possess the power of precipitating the uric acid. This phenomenon solely depends on the tribasic character of phosphoric acid, which allows of a solution of phosphates, which reddens litmus powerfully without containing any free acid.

3. When, however, the least trace of a free acid, even acetic, exists in the urine, the whole of the uric acid is rapidly precipitated; a fact of considerable importance in the study of diseased conditions of the urinary excretion. If our attention is directed to the subject, we see, almost daily, that, when urine is kept for a time, perhaps only a few hours, the uric acid, which at first was in complete solution, becomes gradually deposited in the crystalline form—a change due to the generation of a free acid in the urine by the occurrence of what is called the acid fermentation.

4. Our last point is to ascertain what shape the uric acid assumes when it becomes insoluble, and is precipitated from the urine. It may be thrown down either in combination with a base—that is, in the form of a urate, or as free uric acid. When as a urate, it is often from simple concentration, or from the presence of too small a quantity of water in the urine, and it seldom happens that such deposition takes place in the urinary organs themselves unless there is a something present, such as a foreign body or the nucleus of a calculus, which greatly facilitates it. When, however, such urine is removed from the body and cooled down to the temperature of the air, more especially in cold weather, the appearance of turbidity is extremely common, and often becomes, though most unnecessarily, a source of great mental disquiet to patients. When the urine, either concentrated or not, becomes abnormally acid, it at first causes the urate existing in it to be less soluble, but soon afterwards the acid itself is separated and deposited in the crystalline condition, forming what is commonly known by the name of Cayenne pepper gravel. Let us take what may be looked upon as pure uric acid; dissolve it in boiling water, and then allow it to cool and crystallise; it will be found in oblong tabular crystals, which are both homogeneous and transparent. When uric acid crystallises out from urine, it is more or less coloured, from yellow to brown, and in the form of thin rhomboidal prisms, showing that there must exist in the urine something which causes an alteration not merely in the colour, but also in the crystalline form.

Dr. Ord, in his work on "The Influence of Colloids upon Crystalline Form and Cohesion," gives the results which he has obtained from the crystallisation of uric acid under the influence of urea, colouring matters, mucus, albumen, cane and grape sugar, gum arabic, starch, gelatine, and glycogen. It appears to me that the researches of Dr. Ord and Mr. Rainey are not only valuable, but also seem to throw a ray of light—dim, it is true, at present—upon those phenomena which, as it were, connect true chemical changes with those we are accustomed to look upon as due to the agency of life.

The result of our inquiries, as far as they go, may be summed up in a few words. Perfectly healthy urine should show no appreciable deposit; when, however, it becomes concentrated from deficiency of the watery excretion, then the uric acid is thrown down in the form of a urate. This may occasionally occur within the body, but far more frequently after the urine has been voided; sometimes, however, this change ensues so rapidly that the urine is erroneously supposed to have been passed in that condition. The presence of a solid body in any part of the urinary tract favours deposition very much, and hence urine which would otherwise remain clear may yield a deposit to any substance previously present in the same tract, and may thus add considerably to an already existing calculus. The appearance of the numerous layers so frequently seen around a central nucleus, both in renal and vesical calculi, is thus easily explained. When, however, the urine becomes further altered in composition—if, for example, a free acid is either excreted with the urine or rapidly generated in it through the setting up of the lactic fermentation, the uric acid becomes liberated from its state of combination, and, in a form more or less altered by the presence of colloid matters, is deposited on a previously existing calculus, or is passed as separate rhomboidal crystals or in aggregated masses, constituting gravel or sand. I should feel disposed to confine the name of "sand" or "gravel" exclusively to such deposits which, I believe, seldom form the nucleus or become the starting-point of any calculus. I may add, that urine possessing these characters is frequently voided for months and years without the occurrence of any appreciable inconvenience to the patient. It is true that a calculus may be augmented by contact with such a urine; but, as I have said, it seldom originates in this way

According to this view, which I feel inclined to adopt, gravel or sand consists of uric acid previously in a state of solution, which has become precipitated by the occurrence of some change in the urinary excretion.

Some individuals pass a larger daily quantity of uric acid than others; but, at the same time, those who pass the largest quantity may have a urine little disposed to deposit the principle; and it will be found, as a result of experience, that changes in the urinary excretion, leading to the crystallisation of its contained uric acid, are much more potent factors in the production of sand or gravel than the mere quantity of this acid which is eliminated. If there is a simultaneous occurrence of the two conditions—that is, of increased quantity of the acid and altered state of the urine,—this facilitates still more the production of the morbid appearances.

We have already assumed that the excretion of reptiles and birds consists of uric acid, united with ammonia, and it is usually regarded as being urate of ammonium; under these circumstances it would be expected to behave like such a salt when acted upon by different reagents. We will now see whether it does so.

Let us take two graduated tubes, divided into one hundred parts, and put into one the ordinary salt, the acid urate of ammonium, so as to stand to the height of five divisions. Into the second tube, let us put the dry and powdered white excretion of some large reptile, such as the python or boa, and fill each tube with a one per cent. solution of carbonate of lithium, up to the one hundredth division. Let us place the tubes upright in a stand, and shake them from time to time. On examining the contents of the first tube, after the lapse of hours, days, or even weeks, no change will be perceptible; the artificial urate will still occupy the same space, five divisions, and no more. In the second tube, very different appearances will be exhibited—a change occurring to some extent even after a few minutes, with some slight puffing and some little translucency of the substance; while, in the course of an hour or two, the swelling will become very great, and go on increasing for twenty-four hours or more, till at last a solid magma will be formed, occupying eighty to ninety divisions of the tube; so that the natural urate, which in powder originally occupied a given space, under the influence of a weak alkaline solution will fill up as a solid mass a space seventeen or eighteen times larger than its original room. If absolute alcohol—that is, a spirit devoid of water—is employed, no increase takes place, even after the lapse of a week or more; when, however, after the alcohol has been poured off, a solution of carbonate of lithium is subsequently added, the swelling of the urate goes on in the same way as when no spirit has been previously used. If small masses of the excretion are digested in a strong solution of ammonia for a few hours, and afterwards dried and lightly powdered, it will be found that the property of puffing-up is entirely gone, and the same result ensues when caustic soda or potash is used instead of ammonia. I may here mention that I have examined the excretion of a large number of different reptiles and birds, and always with the same results whenever the specimens have been in a fairly fresh condition.

Having determined the physical condition of the excretion as it exists in animals whose urine is too deficient in water to hold the urates in solution, it appeared to me to be a matter of great importance to arrive at its chemical composition. The common idea is, as I have already said, that it consists of urate of ammonium; and, in the early analyses, ammonia was always found in it, but in small quantities only. There is no doubt as to the presence of ammonia in the urinary excretion of birds and reptiles, for we have only to add a caustic alkali, and the characteristic odour is at once developed; but it is important to go a step further, and to ascertain whether the uric acid, as it exists in the fresh excretion, is so combined as to form a true urate of ammonium. To effect this, I had many experiments made on the excretion of different birds and reptiles. From these the conclusion may be drawn that the uric acid in the pure substance is not combined with any fixed base, such as soda, potash, or lime, but that it is combined either with ammonia itself, or some organic base which readily yields ammonia.

The amount of ammonia varied very considerably in the different specimens which were examined; and, contrary to what I had anticipated, the specimens which were most perfect and exhibited least of all the appearance of disintegration were not those which yielded the most ammonia. It was also found that the swelling or puffing-up peculiarity was almost or entirely absent from those specimens in which the quantity of ammonia was greatest. This was well shown in the excretion of the royal python and of the Australian monitor (lizard), both of which specimens were much injured by decomposition. It would appear, therefore, that beyond a certain percentage, which seems to be equivalent to the formation of about 25 to 32 per cent. of urate of ammonium, the extra amount of ammonia results from some change which has taken place after the excretion has been passed. A close examination by the unassisted eye enables us to see that there has been some disintegration in the substance.

With the exception of those excreta in which decomposition has occurred, the amount of ammonia is far short of that which is necessary to the formation of the true diurate of ammonium. May it not be possible that the uric acid, when first formed, is in combination with some nitrogenised organic base, such as urea? If so, this would account for the results obtained. Or, again, may not an organic compound be first formed in the renal cells, which readily breaks up, yielding, among its chief products, uric acid and ammonia? This is a subject which I have not had leisure to investigate with sufficient thoroughness to be warranted in giving a decided opinion upon it. We have found therefore that the natural urate differs completely from the artificial in its physical properties, at least in so far as regards its power of becoming distended under the influence of water or carbonated alkaline solutions. It now becomes necessary to examine carefully its microscopic structure.

A paper of mine, published in the Medico-Chirurgical Society's Transactions, 1848 (vol. xxxi.), under the title of "Observations on certain Pathological Conditions of the Blood and Urine in Gout, Rheumatism, and Bright's Disease," was illustrated by a plate, which contained, among other drawings, one which exhibited the microscopic appearance of the urinary excretion of the pigeon. This was the first time, I believe, that the minute characters of such excretions had been shown. The results of a reinvestigation of this subject, which I have recently made, will now occupy us for a few minutes, as it bears closely on the subject of renal calculi. I have examined the excretion of a large number of reptiles, birds, and invertebrate animals; and the drawings upon the screen, which are selected from a great many others, will give an idea of the appearances presented.

There is a great uniformity of appearance in the different specimens; in fact, it would be difficult or impossible to separate by microscopic characters the urine of a reptile from that of a bird; the only variation in the different drawings is that which appears in the size and prevalence of the larger spherules; for it will be noticed that there are many more of these in the large birds and reptiles than in the smaller birds, while the small spherules are of about the same size in all specimens depicted. No spherule in the excretion of the canary-bird approaches in size many which are to be seen in that of the rhea. The measurement of the largest spherules is 0·00072 inch, and the smallest about 0·00008 inch.

It seems to me that we should be ignoring all physiological principles if we did not assume that uric acid is originally excreted in the same way by all animals, be they reptiles, birds, or mammals, including man—that if, as we have shown by fair evidence, it is formed in the cells of the kidney in one animal, it is so formed in another, although the different influences to which it may be subsequently subjected may cause an entire change from its original physical condition. In reptiles and birds we see that the uric acid, in combination with some base, is contained in the kidneys in the form of larger and smaller spherules, and we also see that these have a tendency to aggregate and form larger and larger balls or spherules, which are ultimately eliminated from the body. We see, in fact, that these animals are perpetually voiding renal calculi which, although small in size, are yet perfect in form and constitution. Their urinary tract is so constructed that no inconvenience ensues; but were such urine excreted by the mammal, it might at once lead to serious mischief.

May we not, however, get a lesson in pathology from reflecting on these facts? May not these spherules, which, as a rule, are soon dissolved in the watery urine of the mammal, occasionally escape solution, and become the nuclei of renal calculi? This idea is one which, up to the present time, I have never seen suggested, but it is at least worthy of some further thought.

I believe that I am correct when I say that hitherto it has been usual to regard both gravel and calculi as arising always from the precipitation of urinary principles which have been in the urine in a state of solution—a view which, as I have already shown, has some truth in it, though I think that, before I shall have finished the present lecture, I shall be able to lay before you facts which may cause some modification in the opinions which have been commonly held.

In examining several different calculi which had been passed soon after their descent into the bladder, I have found that some are apparently simple—that is, when cut they exhibit a uniform structure throughout; such calculi, however, are generally very small, the largest not exceeding in size a pin's head. Others are evidently compound in their structure, containing a central nucleus surrounded by layers which may be more or less numerous in different calculi; in fact they resemble, when seen through a glass, the larger form of the vesical calculus.

Let us now study more closely these two forms of renal calculus, and let us begin with the more simple kind. I will select one which is very minute indeed—a mere point of matter. This, when placed in a small cell under the microscope, presented an appearance which is exhibited in the enlarged drawing on the screen. It is seen to be irregular on its surface, as if composed of a number of little beads or grains aggregated together. Let us now watch the result of putting into the cell a few drops of a solution of carbonate of lithium. After a few minutes the superficial beads become more or less transparent, and exhibit in many instances the appearance of small cells which have been denuded of their contents. The little calculus soon has a translucent ring around it, which becomes broader and broader as the action of the carbonate of lithium spreads, the opacity of the calculus remaining in the centre only. Under the continued action of the lithia salt this last remnant of opacity also disappears, and the whole calculus is reduced to a translucent substance, which has the appearance of being made up of a great number of little vesicles. If polarised light be employed, this is seen to contain matter having a crystalline structure, but the still further continued action of the alkaline fluid ultimately removes this too, and the calculus is then seen as a mass apparently made up of colloid matter in a more or less membranous shape.

Before proceeding to the examination of the more complex renal calculi, I wish again to draw your attention to the spherules from the excretion of the serpent and the bird, that you may see how they behave under like circumstances. Of course the largest of these is very much smaller than the minutest calculus that we can make use of, but this fact in no way interferes with the observation of such spherules.

Let us first imagine that we put a particle of the white excretion on a microscopic slide in a drop of alcohol, which does not alter the spherules, and, after covering it with a thin glass disc, examine it carefully. Some spherules are seen to be large, some smaller, and some smaller still, till at length a size is reached which seems to be the smallest which they are capable of assuming. Next, let us place a moistened finger upon the thin upper glass and rub it upon the powder for a few seconds, using a fair pressure; then, on re-examination under the microscope, the whole of the spherules have disappeared, and in their place are seen innumerable irregularly rounded particles of a pretty uniform size. If, instead of using pressure, we allow the alcohol on the slide to evaporate and introduce a drop of a solution of carbonate of lithium, and then watch what follows, we shall see that the outlying spherules in the field are usually the first to be acted upon, and exhibit the following appearances:—After a few minutes only some of the spherules show a transparent line around them, which, on close examination, is seen to be composed of transparent beads; this ring grows larger and larger, so that in a short time no opacity remains, save in the centre of the spherule. As time goes on, with renewed application of the alkaline solution the dark central mass gets smaller and smaller, and at last altogether disappears, our original spherule being changed into a round membranous mass, without definite structure, containing crystalline matter which powerfully polarises light, which matter also in turn gives way under long-continued action of the lithia solution.

If we compare this description of what I may call the "dissolving view" presented to us by the changes in the normal spherule of the bird or reptile, with that before given of those which occur in the small or rudimentary calculus, we cannot help being struck by their close resemblance; in fact, whatever differences there may be, seem to be little more than differences of degree. Surely this must make us reflect on the possibility of there being a close relationship between the two, and may fairly suggest to us the question whether the rudimentary uric calculi found in man may not be merely aggregations of spherules—the product of the original cell-formation of the uric acid. In the case of the bird and the reptile we are sure that the spherule cannot have been deposited from uric acid previously dissolved in the urine, seeing that there is no such fluid to dissolve it; and it may be that in the case of man also the individual components of these calculi are simply the original cell-formations of uric acid which have become somewhat altered in chemical composition, and rendered less soluble. If this be true, and if we can show that these rudimentary calculi are not produced by the precipitation of uric acid from the urine, we must at once remove them from that class of deposits which are called sand or gravel, seeing that these latter, whatever their size, have a totally different structure. It is to the spherular grains and the more complex structures that I shall confine the name of renal calculi.

In several renal calculi which I have examined I have found some spherular bodies—masses of irregular shape, resembling much the partially broken-up pyramids, into which the spherules of the excretion from reptiles and birds frequently split when carefully rubbed and only partially disintegrated. I have also found crystals of oxalate of calcium, many of them octahedral in shape. From these examinations I have formed the opinion that the appearances in the nucleus may arise from a slow alteration taking place in the first-formed or spherular urates by the action of the fluid urine upon them, causing the gradual decomposition of the original ammonia salt, and an increase of its insolubility, leading also to the subsequent production of oxalate of calcium, which we know is often the result of the action of a ferment on uric acid.

If, instead of a very small and rudimentary calculus consisting merely of an aggregation of grains, we take one of a larger size and more complex structure—one, for example, one-eighth or one-sixth of an inch in diameter,—we find that around this granular central nucleus layers are arranged in concentric order—that is, the calculus becomes laminated, the number of layers depending greatly on the length of time during which it has been exposed to the action of the urine. These layers vary much in thickness and also in colour, and probably are most of them originally composed of some urate, rather than uric acid itself. The subsequent action of an acid urine on a deposited layer of a urate would often slowly reduce the urate into a state of free uric acid. In examining renal calculi which have this laminate arrangement, I have frequently found the central nucleus almost devoid of colour. What is the cause of this peculiarity of the nucleus? The only explanation which at all satisfies my mind is that the nucleus granules have never been in a state of solution since they were formed in the kidney cells, and therefore have never become recrystallised with the colouring matter of the urine—in fact, that they are in a condition very much like that of the renal spherules of the lower animals. The colour of the layers—a pale pink or dark fawn—is not at all difficult to explain, for whenever uric acid or urates are deposited from solution, they invariably take with them the colouring matter of such solution, which becomes intimately united with the crystalloid, giving it an altered shape.

Influence of Diet.—There can be little doubt that the occurrence of gravel and calculus is largely influenced by the diet, but on this subject I feel sure that the opinions frequently held are not altogether correct and require to be reconsidered. As we shall find that a gouty diathesis is so potent in the production of the diseases under review, it will be quite safe, in so far as the discussion of food is concerned, to assume that what tends to produce gout tends also to develop calculus, and that the diet which is of avail in the treatment of the one disease is equally so in the management of the other. It will be desirable to turn our attention to the principal groups of aliments and ascertain what influence they have upon the formation of uric acid and also upon its condition with respect to solubility.

1. *Sugar.*—The most common of the non-nitrogenised principles contained in food is starch, seeing that it forms 70 per cent. of wheaten flour, and almost the whole of many of the simple amylaceous articles of food, as rice, maize, arrow-root, sago, &c.; also of the potato, turnip, carrot, and so on, when these latter are dried. It can be shown that, when taken into the alimentary canal, starch is soon changed

into glucose sugar by the action of the saliva and pancreatic juices; and, when cane sugar is taken, the same change ensues, so that however carefully sugar is avoided as an article of food, it is still abundantly formed in the canal when amylaceous matters are eaten, and the result is the same whether a pound of starch in any of its dietetic forms or a pound of cane sugar be taken.

There is a very popular idea that sugar causes what is termed acidity, and hence it is scrupulously avoided by many. Is this true? Between two or three years ago I was much struck at seeing an American surgeon of great repute putting lump after lump of white sugar into his tea, and I asked him why he did so. He told me that in the States it is a common habit to take sugar thus as a preventive of heartburn, and that he took it for that purpose. His answer made a strong impression on my mind, and since then I have often questioned dyspeptic patients as to their experience on this point. At first nearly all exclaim, "Of course sugar causes acidity," but as yet I have failed to find anyone who could assure me, from personal experience, that the eating of lumps of ordinary white sugar produces more so-called acidity than taking any other article of diet. It must be borne in mind that I do not for a moment include sweetened fruits, and such-like substances, in the same category as simple sugar. One can hardly believe that the eating of a lump of cane sugar would seriously add to the glucose which is daily produced in the alimentary canal of an individual living on an ordinary mixed diet. Let us see what has been found experimentally with regard to the influence of sugar on the production of uric acid. Böcker says that the effect, in man, is to lessen the quantity of that principle, and Bischoff and Voit have proved that, in dogs, starch produces the same effect on the urinary excretion as sugar, so I think we may say that there is no increase in the uric acid when sugar is taken.

I must devote a few minutes to the discussion of a most important subject—viz., the influence of different alcoholic beverages on the production of uric gravel and renal calculi. We must remember that all such beverages contain alcohol united with different proportions of water, some little more than this; others, however, contain sugar together with colouring and so-called extractive matters, also salts of potash and lime united with vegetable or mineral acids. Many wines also contain a certain amount of some free organic acid. Now, have we any facts with regard to the special effects of different wines in the diseases which we are now considering? I think we have many, and much information which we can use to guide us in the prevention of such diseases. It may, as I believe, be confidently asserted with respect to gout, that, with an absence of alcohol in any shape, coupled with an absence of hereditary predisposition derived from alcohol-drinking ancestors, the disease would be practically unknown.

It is most essential to separate the different kinds of alcoholic beverages from each other in estimating their tendency to produce disease. Thus, alcohol in the form of distilled spirits, although when taken in excess it causes serious mischief, injuring the liver, kidneys, heart and other organs, still has little or no power of producing the uric acid diathesis, or, at any rate, the gouty development of it. In spirit-drinking countries, or among spirit-drinking families, gout is unknown. Look at Scotland and its whisky-drinking classes—the disease is practically absent, hardly ever seen in the hospitals. Look at Poland, where they drink a kind of arrack; the same holds good.

When, however, we investigate the influence of wines we shall find a different result. Drinkers of the common light wines, such as the red Bordeaux and the Rhine wines, suffer but little, while, among the same nations, those who indulge freely in beer are by no means free. The natural light wines, in which the alcohol is small in amount, while there is an almost complete absence of unfermented matter, which contain, also, a considerable quantity of acid vegetable salts, are little liable either to produce gout or to lead to the formation of calculus or gravel. On the other hand, the Peninsular wines and those which resemble them, which are stronger in alcohol, contain much unfermented matter, and are almost devoid of the vegetable salts, have great gout-producing power, and lead readily to a condition of urine favourable to the production of gravel and calculus.

We come, lastly, to the malt liquors, ale, beer, stout, and porter. From my own experience, and I believe it is also the experience of all who have attended to the subject, I can confidently assert that these beverages have a great tendency to produce the uric acid diathesis. Compare the hospitals of Edinburgh and Glasgow with those of London; in the former gout is scarcely known, in the latter the disease is common, the difference, as I believe, being chiefly due to the different beverages drunk by the working classes of the two countries; it is, in fact, the difference between whisky and malt liquors.

It is necessary that we should at least endeavour to ascertain what principle or principles, present in some of these alcoholic beverages, absent from others, lead to the development of this diathesis or aggravate it when it is already manifested owing to hereditary or other causes. It cannot be the alcohol alone; this, I believe, can be fully and satisfactorily proved, seeing that large groups of people whose custom is to drink freely of distilled spirits are yet free; instances are to hand in Scotland, Sweden and Norway, and Poland. It cannot be the sugar alone; for, although the partially fermented wines and malt liquors contain sugar, yet sugar added to distilled spirit does not appear to produce the uric acid diathesis. It cannot be the acidity alone; for the wines which are most harmless are quite as acid or even more so than malt liquors and the Peninsular wines, and many people who strongly object to the least acidity in wines, will often take lemon juice to an extravagant extent. If, then, neither the alcohol, nor the sugar, nor the acidity by itself is the cause of certain beverages proving so injurious, is it a combination of any of these that does the harm? We already know that the combinations of alcohol with sugar, and that of alcohol with acid salts, are innocuous as far as the uric acid diathesis is concerned. What, then, is there left for us to fall back upon in explanation of the peculiar properties which some of these beverages possess, while others are devoid of them? The only conclusion that I can arrive at with my present knowledge—and it is the result of much thought during many years—is that it is something which is a result of imperfect fermentation, and you will find that it is those beverages in which fermentation has commenced, and has been allowed to proceed to a certain extent and has then been checked, which, of a certainty, cause gout, and probably lead also to the production of gravel and calculus. If I am asked to state more exactly what this principle is, I cannot do so; it may be an influence only, a condition of matter—a ferment.

In connexion with this subject, however, I must return for a moment to that of sugar, which, I told you, had, as I thought, been regarded askance without due cause. I would say that I do not for a moment classify with sugar either sweetened fruits or vegetables; for I am quite sure that such articles of diet will frequently produce heartburn and other dyspeptic annoyances in individuals who are not in the least inconvenienced by sugar itself. I cannot help thinking that these contain a something which is not simple sugar, but a substance which is the result of the long contact of the sugar with the fruit or vegetable juices, a kind of semi-fermented matter—in fact, that same "something" which exists in the stronger wines and the various malt liquors. Of this I feel confident, that in many cases where sugar, whether by itself or in tea, coffee, and light puddings, does not disagree, and where fresh fruit, although sweet, produces no discomfort, the combination of sugar with these juices, if time has been given for them to act upon each other, will often cause well-marked dyspeptic symptoms. But, it may be said, if so, a ripe orange cannot be a good thing to eat, as it contains both sugar and acid juice, and these substances have been in contact with each other for a long time. I answer, not necessarily so; so long as the orange exists as a fruit, with its botanical structure intact, so long there may be no change taking place between its different constituents. We have a striking analogy to this in the case of the bitter almond. When whole this seed contains the crystalline amygdaline and an albuminous ferment. Separate one of these from the other, and each by itself is innocuous; crush and moisten the almond, prussic acid is immediately formed, and the union of the two principles is the production of a deadly poison.

LONDON HOSPITAL MEDICAL COLLEGE.—The Medical and Surgical Scholarships and the Duckworth Nelson Prize for Medicine and Surgery have this year been awarded as follows:—Medical Scholarship, Mr. A. T. Schofield; Mr. P. C. M'D. Howse, hon. certificate. Surgical Scholarship, Mr. P. C. M'D. Howse; Mr. O. C. Jones, hon. certificate. Duckworth Nelson Prize, Mr. P. C. M'D. Howse; Mr. A. T. Schofield, hon. certificate.

Croonian Lectures
ON
MODERN THEORIES AND TREATMENT OF PHTHISIS.

Delivered at the Royal College of Physicians, London,

BY JAMES EDWARD POLLOCK, M.D.,
CONSULTING PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

LECTURE II.—PART II.

WE come now to the experiments of Koch on the bacilli of tubercle, which have attracted so much attention, and seem especially to have awoke the public to the opinion of the specific character and contagious nature of phthisis. I have purposely considered other parasitic diseases before this one, in order that we may see how tubercle is allied to many affections and shares their pathological meaning. We may condense Koch's opinions as follows. By late researches on the tubercle ferment the constant presence of bacilli is proved in recent tubercular formations. These are small, like those of leprosy, but finer, with pointed extremities. Their protoplasm easily colours with methyl blue, the solution having been made alkaline. They are found in great quantity in inflammation of a tuberculous character while progressing; when the height of the affection is past they diminish, as we found in malarious fever. They are always seen in the periphery of tubercular nodules isolated or grouped, in the so-called giant cells, and in chronic tubercle often only in the giant cells. They are always present in caverns mixed with others of analogous form, which do not, however, turn blue with methyl blue; the others take the brown colour of vesuvin. In very recent tubercular formations, they are found without the colouring test in bloodvessels, lymphatics, and intercellular spaces. Koch established an artificial culture of these bacilli, making use of the serum of the blood of the ox for that purpose, which he dried by gentle evaporation at a temperature of 122° to 120° F., the coagulation of the serum being avoided. The bacillus of tubercle must be at a minimum temperature of 94°, the maximum 105°. The bacilli of malaria require a higher temperature. Those of tubercle take about ten days to produce the germs, which cover the surface like scales. With these he experiments on animals (rats and mice). He either introduced bacilli into the blood or into various tissues of the body, and always obtained a positive result—viz., tubercular infection. Nothing occurred in tissues where inoculation was practised under eight days, the glands inflamed in fourteen days, the general infection of the system took place in six weeks, then tubercle was developed in various organs, chiefly the liver and spleen. In phthisical cases in men half the number had bacilli in the sputa, and Koch never found them in persons not affected by pulmonary tuberculosis. Further, from inoculation with the sputa of phthisis, even when it had been previously dried, he never failed to produce tuberculous infections. The inference would seem to be that a spore producing a bacillus is the cause of phthisis. The opinion and experiments of Crudeli of Rome are especially advanced. He thinks scrofulous and tuberculous inflammations distinguished from all other pathological processes which produce cheesy masses by this: that the cheesy masses contain the tubercular contagion, which is proved by the inoculation of rabbits which reproduces the tuberculous inflammation. The cornea of the rabbit inoculated with tubercle evidenced inflammatory action after twenty days, from which tubercle can be reproduced. Tubercle in its earliest days has in its centre a mass of very minute granules, with a small bloodvessel or lymphatic. These granules are not the fatty albuminoid detritus of tissues, for they resist the action of alkalies and ethers. The granules in tubercle are micrococci; they multiply themselves in the blood, and in tissues where scrofulous inflammations are present. A wounded part will be invaded by them if inoculation occur. Bacilli are found in the tubercular nodules, and the peculiar contagion is probably in these. It is found endogenous—that is, it is produced and multiplied in a system affected by what he calls tubercular sickness. It is transmissible from the sick to healthy persons; is found especially in localities where tuberculous men, or animals as oxen, are grouped in numbers; in the morbid secretions of affected organs; in the liquids of normal secretions, and notably in milk. It can be transmitted by using the milk of tuberculous cows, they being very liable to that class of disease. Klebs made animals tuberculous by feeding them on the milk of tuberculous cows. Lockmann, of Christiania, found a whole population in a district of Sweden, previously free from tuberculous affections, become so soon after the introduction of a breed of Ayrshire cows which were known to be affected by that disease. On this evidence Crudeli asks whether man did not originally derive tubercle from cows through their milk. He says it is a matter of historical record that America had no tubercle before its discovery by Columbus, and the introduction of European population who imported cows. There were no mammiferous herb-eating animals on the American continent previously, excepting the llama of Peru. On this point I think we shall agree to await further evidence. Crudeli considers that tubercle can enter the organism in intra-uterine life through the placenta, also by the father communicating it to the ovum. Tubercular metritis in the female and prostatic tubercular disease in man can infect. The contagion may also enter by the respiratory tract; to breathe the air where many consumptives are assembled, as in hospitals, may turn out very dangerous, and he thinks this is proved by the experience of the Consumption Hospital. The disease is especially communicable from husband to wife. Wounds exposed to tubercular air can be also infected.

Tubercular infection is either primitive and local or general, but in all cases infectious. In those which seem obscure there is some part of the vascular system already the seat of infection, but the general infection is always due to a local primary one. The matter is conveyed by bloodvessels and lymphatics; it forms new foci in glands and organs, where the infection multiplies itself till the whole system is engaged. These foci or stations are determined by local congestions and injuries, producing a diminished resistance of the tissues. Some persons escape the contagion to which they are exposed, as the physiological activity of the tissue, and especially of the circulating powers, hinders the contagion from taking effect. Even when the entry of tubercular infection has occurred, it is limited to that spot of entrance for a time, it being necessary that the condition of the organism be such as to permit the contagion to fix itself and to multiply in it. If it does enter the system it is eliminated by the secretions, the skin and kidneys especially. Crudeli, Koch, and others acknowledge the tubercular habit or constitution, of which they consider that some elements are known, and they confess to a predisposition to tuberculosis. Such are diminished respiratory capacity, lessened cardiac and arterial power and tension compared to the bulk of the tissues. Puberty and rapid growth, the lymphatic and scrofulous habit, incline to phthisis. This is probably caused by the incomplete drainage of any part by the lymphatics, by which a great vulnerability of the lymphatic system is induced. It is confessed that these abnormal conditions can be acquired by bad physical education, deprivation of fresh air, and exercise, &c.; but, again, it is acknowledged that it can be both hereditary and congenital. The difficulties of the therapeutics of such an affection are dwelt on, and I shall again have occasion to notice them; but will mention here that, according to this theory, in every node of tubercle the central part contains the contagion, while surrounding this there is a zone of dead tissue in which circulation has ceased. Across this zone the specific ferment can pass in the interstices between the cells; but the therapeutic agent cannot pass, and has already been greatly diluted in the mass of the blood. The same observation has been applied to the thickening of tissues surrounding syphilis. But, granting that we have arrived at the fact that in all tubercle, or so-called tubercle, and in all the secondary structure changes of phthisis we can recognise a certain parasite, in what manner do those changes manifest themselves in the system?

Perhaps a division (made by others) may be followed with advantage—namely, septic acute changes and specific changes. In the former we must class infection from wounds, putrid matters, the exanthemata, erysipelas, diphtheria, typhoid, malaria; in the latter syphilis and tubercle, and perhaps rheumatism. Septicæmia is distinguished from all

others by its short incubation period, and by its not having any elective seat in the system; for it pervades all tissues with rapidity. Typhoid, variola, and the exanthems, with diphtheria, seem to have selected tissues in which to germinate, as the intestine in typhoid and the nerve-centres in diphtheria. Rabies stands alone with a long incubation period and an acute final crisis, but in this it is resembled by rheumatism.

Taking, however, all diseases attributed to parasitic germs, excepting septicæmia, there seems to be a mode of evolution in common. They all have to find a nidus or station—a tissue of the body, in fact, selected by, and peculiar to, that particular germ in which it can, and does, mature and fructify. The incubation period, be it long or short, is just this time in which the seed is undergoing those changes which a grain of wheat does in the soil of the earth. That particular grain dies, but in dying multiplies itself indefinitely. The new germs are let loose into the circulation and lymphatics, for they are small enough to enter the smallest of these vessels, and then a fresh colony is formed in another site, perhaps in another organ. At the date of the first settlement of germs in phthisis there are febrile symptoms and inflammatory products, or so-called tubercle, in a localised part. During the incubation period there is a pause, be it diurnal or of days, or even a longer interval; and at the first evolution of new germs there is renewed pyrexia, and either extension locally of the first mischief detected in an organ, or a secondary nidus of disease set up at a distance. Taking the malarious disease in its common form of ague, the cold stage is that of first evolution of germs into the blood; they diminish in the hot, and die in the remission period. The pause is the incubation period, followed by similar phenomena in a cycle.

Now, applying this theory to phthisis as we see it, we have much that is plausible in this matter-of-fact way of interpreting its symptoms. The seed-sowing time, the period initiative of active symptoms, when the patient is in a subfebrile state, with few or no signs of local irritation in the lungs, is the time when he has received germs into the economy, and which he has failed to eliminate. The evolution period is that highly feverish state, with slight remissions, when the inflammatory or tubercular product is breaking up. At such time, say the theorists, the new crop of germs is being let loose into the system. At this period all the secretions are apt to be disordered, that of the skin and kidneys especially, and diarrhœa often sets in. An elimination is being attempted, and, perhaps, fails. Just then we often find a doubtful sound of crackle, with a little dulness of the apex or base of the opposite lung, and here is now a nidus station, or colony of the germs, which have been formed at the first station and been carried hither by the known channels of the circulation or lymphatics. The pauses or subsidence of symptoms in phthisis are very familiar to us, and we are asked to believe that they are the periods when the seed sown is again silently preparing a new crop in the soil of the tissues. The third period of local disease, when much structure has broken down and a pus-secreting surface is formed, is known to abound in these bacilli, which are abundantly found in the sputa and other secretions of the patients.

I come now, Sir, to the crucial question whether, granting that these parasites are found in all cases of phthisis, granting that their inoculation in animals will produce a like disease, are the clinical phenomena of phthisis sufficiently accounted for by the germ theory? and in the few observations which I shall make I must ask you to class me as an inquirer and not as an advocate, being well assured that you are yourselves precisely in that mental attitude of impartiality which is open to the reception of new truths, but repellent of obvious error. The story of phthisis is commonly this. In certain persons, whose constitution is predisposed, or who have inherited a predisposition to a form of disease, and most commonly at a certain age, with or without actual cold taking or manifest cause, a slight wasting occurs with a subfebrile state followed by pulmonary symptoms, as cough and expectoration, and blood-spitting. A physical examination reveals incipient disease in a portion of lung. As regards heredity, this sequence of events is so common in some families that a whole generation will be carried off at about the same age. The sickness I am describing will take place without any exposure or direct contact with persons similarly diseased. Nay, it will occur to the members of the same family living at the greatest distances from each other, some in America, some in England. There is another form of disease called accidental, because it is not proved to be inherited from an ancestor, and seems to be due to causes of local origin, as taking of cold, pneumonia, &c., and this again without previous contact with persons similarly diseased.

Are we to believe that both varieties, the inherited and accidental, are instances of seeds, that is germs, introduced into the system from without, and there producing the characteristics, multiplication and fructification, which we have been studying? Or, if germs, then in the inherited form were they derived from the parent? This implies a long latent period of years during which the germ has been there but produced no effects on the system? Again, the introduction of such germs into the system in other than inherited cases should be a matter of proof and certainty before the theory can be received. A person falls into ill-health from depressing causes, as poor food, bad dwelling, anxiety, loss of sleep, and such like, and becomes phthisical, but where are the germs? The theorist will tell us that in such a state the individual we have supposed presents the exact soil suited for the reception and growth of such germs of disease. And so it is; but the field well ploughed and manured and ready for the seed-sowing will produce no grain unless the germs are introduced. The theorist will no doubt say, as regards the hereditary cases, that the seed was sown before birth; but if this be true, what a long period of incubation it has required. The introduction of the germs seems to me to be a difficulty yet unsolved. It is not sufficient to prove that germs introduced will bring forth fruit. This indeed seems clear from the evidence, but that such germs have been sown as an antecedent to all cases of phthisis has not been proved, and must be proved before we can accept the proposition in its entirety that phthisis has its origin in parasites.

In pursuing the clinical history of phthisis, we must, however, acknowledge that in its later stages the theory of the fructification and multiplication of germs harmonises well with what we observe at the bedside. The theory is that the germ has first a local position—say in the lung—that after a period of incubation it multiplies, and that parasites are carried by the blood and lymphatics to another and distant part where a colony, or station, or nidus is formed, a fresh deposit of morbid parasitic matter taking place with the same phenomena as in the first local irritation and general febrile disorder. Now, the story of phthisis is well known to consist of exacerbations and remissions, and the history of secondary deposits of miliary tubercle, of secondary infections of the opposite lung, and of the small intestine and of meningitis, singularly corresponds with the theory we have described. In the latest stages of cavity-bronchiectasis, &c., the phenomena are often more septic than specific; yet, if we may adopt the germ theory, we have a ready solution of the clinical conditions. The presence of a peculiar germ appears to be proved, and its secondary results seem demonstrated; but its originating power, its being the sole and invariable cause of the disease, seems scarcely proved. Comparing the tubercular germs with those of other parasitic diseases, we may have some light thrown on the *modus operandi*. Take malarious fever. In the experiments I have detailed it seems certain that malarious micrococci can be detected and cultivated and inoculated, with the invariable sequence of certain symptoms, the blood examined containing more bacilli in the invasion stage and less in the hot and sweating stages of ague, while in the remission period they nearly disappear. The poison is peculiar to certain localities, persons not visiting those places do not get the disease. It is proved to be non-contagious—that is, no contact of individuals will convey it from one to the other. The nature of the attacks and remissions so resemble phthisis that I have selected it first for comparison. If phthisis be contagious, why is not malarious fever or ague also?

I take, again, rheumatic fever, in which the bacilli are most marked in the fibrous structures and muscles, the endocardium, &c. Its symptoms also are acute pyrexia with profuse sweatings. It is one of the most heritable of diseases, and runs in families to a remarkable extent. What of the germs? Were they congenitally introduced; or were they acquired from outside? What of the latent or incubation period? A man will often have an interval of seven or ten years between the attacks. Are the germs there, but latent for all that time? Is it that they have not reached that part of the system capable of assisting in their multiplication? This can scarcely be, seeing that in some

former attack a nidus may have already been formed in a joint or in the mitral valve. Again, has ever anyone supposed rheumatism to be contagious? In syphilis we certainly find a more close analogy to phthisis than in the other affections named. Granting the introduction into the system of a definite poison by an ascertained inoculation, we find a long latent period followed by characteristic symptoms—skin rashes with pyrexia, and deposits in distant organs: the brain, the tongue, the periosteum. The theory of successive developments of parasites will fit in here; or rather let us say that, parasitic or not, an infecting material first found in the hard chancre has passed through the blood and lymphatics and manifested itself after a long interval in distant parts. Its identity with the inoculated spot is further evidenced by its amenability to certain specific remedies, as mercury and iodine. We see in both syphilis and tubercle a selection of certain tissues, and we may contrast this with purely septic infections which seem to develop germs in all tissues and membranes.

But beyond all these analogies, and lying deeper in our pathology than any discovery of parasites, are other questions. Can all the systemic phenomena of such diseases be accounted for by accepting the proposed theory? Let us take phthisis tubercle, excluding miliary tuberculosis in its acute primary form. If asked what are the prominent systemic characters of phthisis, we should reply fever and waste. The characteristics of fever are disintegration of the living substance of the body, and increased and diminished constancy of bodily temperature. Fever is not merely a state but a process, and, as Burdon-Sanderson says, has had its beginning in the entrance into or action on the system of some affecting or infecting cause. The cause of waste is a consumption of albumen, which passes out of the system as urea, and which is derived either from blood-corpuscles, or from muscular detritus, or from both. It is probable that a breaking down of the blood-corpuscles is a part of the febrile process. The colouring-matter of the blood is the means by which oxygen is distributed to the tissues, and the destruction of it must impair every function of organic life. In fever the excessive nitrogen and carbonic acid passing out of the system is supplied by the waste of muscle and of blood-corpuscles. The same authority remarks that the tissue origin of fever is the basis on which we hope eventually to construct an explanation of the process. Fever probably originates with living tissues, and is from first to last a disease of the protoplasm, to which all systemic disturbances are secondary. He adds that at bottom we are all humoralists and believe in infection, and that fever is tacitly assumed to be the product of a material fever-producing cause contained in the blood or tissue juice, the morbific action of which on the organism is antecedent to all functional disturbances whatever. In applying these facts and theories to phthisis we may see how large a question is the pathology of that disease, and how inseparable are its phenomena from those produced by other affections accompanied by elevated temperatures and waste. That it has some analogies to purely zymotic disease is undoubted, but the question may fairly be asked whether in the absence of proof of the entrance or inoculation of any germ it is not possible to conceive blood changes which may originate the train of symptoms. The moment that the blood is overladen by nitrogenous material, its corpuscles destroyed, and the detritus of muscular waste poured into it, we are assured that the presence of bacilli is manifested. In all degradations of vital fluids, nay, of all organised structures, do we not observe the same law, the development of parasites? Those more evident to our senses, as all the parasitic worms, assail the enfeebled body and enfeebled tissues, so many parasites, and in the vegetable world innumerable lower growths, become manifest when the organisation of the tree or plant is impaired. May it not be so also in those blood changes which precede the development of tubercle? May it be possible that the bacillus is the consequence, and not the cause, of the disease? the lower organisation which replaces the healthy blood-corpuscle? In the present state of our pathology it is impossible to answer these questions, but thoughtful inquiry will consider them in weighing the evidence which time and experiment will shortly develop on all sides. For we cannot stop where we are, nor at once accept as a solution to all our difficulties the theory which has its avowed basis in experiment and not in clinical observation, and which is as yet rather the fruit of the laboratory than of the hospital.

A CASE OF LARGE FEMORAL HERNIA,

WHERE SUDDEN RUPTURE OF ITS COVERINGS OCCURRED, AND A PORTION OF INTESTINE WAS PROTRUDING FOR SEVERAL HOURS BEFORE REDUCTION.[1]

BY BERNARD PITTS, F.R.C.S. ENG.,
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THE following case is a very unusual one. I have not heard of any similar accident. It is also certainly rare for recovery to take place when the intestine has been so much manipulated and so long exposed. The patient was admitted last December into St. Thomas's Hospital, into one of Mr. Mason's beds. I operated on her as a case of urgency. I am indebted to Mr. Mason for allowing me to continue in charge of the case.

Frances V——, aged forty-six, a laundry-woman, has suffered from a right femoral hernia for twenty years. She wore a truss till three years ago. On Aug. 30th, 1880, she was admitted into Guy's Hospital with symptoms of strangulation of three days' duration. She had not worn a truss for a year previously. An operation was performed by Mr. Jacobson. The sac was very thick and intestine dark. She left the hospital on Sept. 27th, wearing a truss. The hernia at the time of operation was about the size of two fists. For one year after this she kept up the hernia with the truss, but subsequently the great increase in the size of the hernia rendered the truss useless. During the last winter she has suffered from a bad cough, and the hernia became as large as a child's head, but always reducible. Several small ulcers formed on the skin, which caused her to leave the truss off altogether. About nine o'clock on the evening of the 4th of last December the patient was going upstairs in her home at Kennington, when, whilst sneezing violently, she felt something give way suddenly in her right groin. She became very faint, but managed to walk to her bedroom, and then discovered that about a foot of intestine had escaped through a rent in the coverings of the hernia. She made an attempt to return it, and sent for her medical man, who tried taxis for a short time, and then advised her removal to St. Thomas's Hospital. She was brought to the hospital in a cab on a cold and frosty night. I saw her directly on her admission at twelve o'clock. She was an extremely stout woman, and suffering then from severe shock. An examination under ether was at once made on the bed, and one foot and a half of small intestine was found protruded through a rent in the skin, about an inch long, and situated a little above the old operation cicatrix. There were one or two chronic, small ulcers to be seen on and near the lower part of the cicatrix. The exposed intestine was bruised, congested, dirty, and very cold. A number of hairs and foreign particles were removed from the bowel and mesentery, which was then carefully cleansed with warm carbolic lotion. Failing to get the bowel back by taxis, the opening in the skin was enlarged freely, and a large quantity of small intestine escaped from the sac, at least four or five feet, together with the cæcum. A slight enlargement of the crural ring was made with the hernia knife, and by patient manipulation the intestines were returned into the abdominal cavity. A sponge was placed in the opening, and the very thickened sac was dissected from its surroundings and removed; this involved the ligature of a considerable number of vessels. The sponge was then removed, drainage for the peritoneal cavity provided, and the cut edges of the sac brought together by very stout catgut. A large portion of redundant skin (including the cicatrix and the ulcerated parts) was then removed, and the edges of the wound brought together by silk sutures, and the wound dressed with carbolic gauze. The patient slept a little during the night after a subcutaneous injection of morphia. On the morning of Dec. 5th the wound was dressed, the temperature being 100·4°. In the after-part of the day the breathing became very laboured. Pulse 132; temperature 102·4°; great lividity of countenance. She was propped up in bed and brandy administered. The urine was found albuminous. The subcutaneous injections were discontinued.—6th: Breathing decidedly better, but cough very troublesome. Temperature normal. The wound was dressed and the abdominal drain removed. After this she made a slow recovery, the temperature never reaching higher

[1] Read before the Medical Society of London, Feb. 19th.

than 100°. She has been for some time convalescent and is wearing a truss.

Remarks.—It certainly seems difficult to understand how such an accident as happened to this woman was possible. By a mere effort of sneezing a thick sac and free movable, though stretched, skin were split. The rent had much the appearance of an incised wound; it occurred at a part where the skin was perfectly sound, but close to the cicatrix of the former operation. I imagine this would be a point more likely to give way than the cicatrix itself, because it was the junction, as it were, of the new cloth with the old, and where the movable part of the skin joined the adherent. The case is interesting also in a medico-legal aspect, for supposing the patient had been unable to give an account of the occurrence, suspicion of violence must necessarily have arisen. In the treatment of the case the most important point was to thoroughly cleanse the protruded parts and then to get them back as quickly as possible into the abdominal cavity. In order to avoid increase of shock I operated on the bed at the time of the examination of the patient, and did not use the spray. Drainage of the peritoneal cavity was provided, because it was thought that some peritoneal inflammation might necessarily be expected. The latter part of the operation—viz., attempting a form of radical cure—occupied a good deal of time, and must undoubtedly have increased the shock to the patient, but was necessary on account of the very violent cough from which the patient was suffering; and, moreover, the woman is now in a much better condition than she was before the accident occurred. The hernial opening is now perfectly under the control of a light truss, and with proper care the hernia ought never to attain to anything like its former inconvenient dimensions. I believe also, that by getting rid of a large sac and redundant skin, the chances of continued suppuration are much lessened, and where there is a large hernial opening, the ligature of the neck of the sac diminishes the danger of inflammatory extension from the wound to the peritoneal cavity.

When the sac has been opened in cases of strangulation occurring in large umbilical and scrotal herniæ especially, a great deal of improvement in the after-condition of the patient may be effected by taking redundant parts freely away. In August, 1881, a man was under my care with a very large femoral hernia, the largest I have ever seen, quite as large as a man's head. It had been irreducible, and was of about the same size for many years. I had to open the sac for symptoms of obstruction. After taking away a quantity of omentum, and replacing the intestines, I dissected out the sac, removing a portion of sac and skin corresponding, which measured about thirty inches in circumference. I was fearful at the time whether the abdomen would tolerate the continued presence of so much intestine that had been in the habit of dwelling outside. The man made a good recovery. I have seen him frequently since, and he has been able to keep up the rupture with his truss. He has therefore parted with a most inconvenient burden. The sac in a very old-standing hernia is so thick that union of its edges forms a very firm support. The success that followed in this case determined me to pursue a similar course in the case here recorded.

CASE OF
RAPID ACUTE MENINGITIS, WITH DEATH.

BY ERNEST F. NEVE, M.B. ED., M.R.C.S.,
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ON Tuesday, Nov. 28th, 1882, I was called to visit G——, a girl aged about eight years. None of the past history in the least concerned the present illness; the child had been perfectly healthy, although exposed to great vicissitudes—want of food, cold, &c. The immediate previous history was as follows. In the morning of the day of my visit, on rising, the child complained of a slight pain in the left side of the neck. As she soon ceased to complain, the mother paid but little attention to her. During the morning the child was running about, and seemed, as the mother said, perfectly well. In the middle of the day she lay down on the bed and fell fast asleep. About two or three hours afterwards, the mother, who wanted to go out, found some difficulty in waking her; she seemed drowsy, spoke indistinctly, and was indisposed to move. However, she got up and went out at 5.30 P.M. and sang in the streets till 7 P.M. It was a very cold day. About that time the child left her mother's side to get change for sixpence, and did not return. After ten minutes' time the mother went in search of her, and found her lying on a door-step unconscious and somewhat delirious, talking about "sugar-candy, and all kinds of things." A bystander put the child into a cab, and she was conveyed home. The mother says that she remained in the same condition till I saw her at 9.30 P.M. She was then lying on her left side, with the knees and arms flexed and drawn up, and the muscles of the neck contracted. The cheeks were slightly flushed, the expression of the face that of repose, the eyes closed, not tightly. There were no movements of the muscles of the face; the head was warm, but not hot; the temperature was 100·5° in the axilla; the body felt hot, the feet and hands cold; the respiration was regular and deep, not stertorous, 25 per minute; the pulse was 100 per minute, extremely feeble, and hardly perceptible; the cardiac impulse was also excessively weak. The left pupil was widely dilated, the right markedly contracted; both reacted to light, and the left contracted when a light was held before the right. The child was quite unconscious. When moved over on the right side, however, she groaned. When the head was firmly touched, or the neck moved, she said once or twice, "Oh, dear!" and moved her hands up as if to remove the annoyance. There was no evidence of either fracture or bruise on examination of the head. I ordered a blister for the left side of the head, a drastic purge of jalap, and hot bottles to be applied to the feet.

The child's death, which occurred next morning at 9 A.M., was immediately preceded by two or three convulsive fits. After one of these I am told that she vomited some yellowish material, possibly the powder administered the previous evening.

Autopsy, thirty hours after death.—This was refused by the mother. I declined giving the certificate, and the authorities appointed Dr. H. D. Littlejohn to perform it. I was present. The dura mater was firmly adherent to the calvaria at a great many points. When reflected the veins of the surface were much distended with blood. The dura mater was not adherent to the arachnoid. There was a distinct infiltration of purulent matter under the arachnoid, over the cerebral convexity, occupying especially the spaces between the convolutions and extending round to the base. On removing the brain, there was found at its base about half an ounce of sero-purulent fluid with here and there a puro-fibrinous deposit; this existed especially around the optic nerves. There was no macroscopic evidence of tubercle. The pia mater was injected but not tough. The cortical substance was rather soft. There was scarcely any fluid in the ventricles and no further evidence of any lesion.

Remarks.—The chief points of interest in the case are:—1. The rapidity of the onset of the disease and the absence of prodromata, except the slight cervical pain. 2. In the character of the first stage there was a marked absence of the usual symptoms. There was no twitching of the muscles, no vomiting, no evidence of paralysis, even of the third nerve, except as far as the dilatation of the pupil on the left side was concerned. When seen at 9.30 P.M. the temperature was 100·5°. There was no ground for supposing that the child had a headache. The child, according to the mother's account, remained in the same condition during the night. 3. She seems to have passed into the comatose state the following morning, this condition being preceded by the convulsive attacks and vomiting. After an extremely brief duration of this stage she died in a convulsive fit, according to the account of the mother.

Whether the disease had been latent for some days and the mother inattentive to the child's condition, I cannot say. I can see no evidence to lead me to consider it a case of exacerbation of pre-existing tubercular meningitis. The evidence, such as it is, points, I cannot help thinking, to the exposure to cold as the exciting cause of the disease.

Edinburgh.

THE ROYAL SEA BATHING INFIRMARY.—The annual meeting of this charity was held last week, when it was stated that the expenditure for the past year had far exceeded the income, and that, consequently, the invested capital had been drawn upon to meet the deficiency. The wing erected at the sole cost of Sir Erasmus Wilson was finished and ready for occupation, and the Princess of Wales has consented for the four wings to be named after herself and her three daughters.

ON THE

SEPARATION AND TRANSPLANTATION OF OVARIAN CYSTS.

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THE present paper is illustrative of a very uncommon pathological condition, and affords some important and interesting details from a clinical aspect. Five cases have come under my notice where cysts were transplanted to a new situation; in one the separation was not absolutely complete when the patient was operated upon, though the transplantation was advanced; in the three others the union from the place of original development was entirely severed, and a connexion established under different auspices with fresh structures. The process by which this was accomplished created much disturbance for a time, but the cysts afterwards appear to have settled down with a singular accommodation on the part of their surroundings. This toleration after an inflammatory storm has subsided is an interesting feature to note; the contest during the while is severe, the fresh region resents the intrusion of the foreign body, the temperature rises, the pulse quickens, there are pain and constitutional distress. This is continued, with varying doubts as to the issue, for an uncertain time, until the persistence of the invasion overcomes the reluctance of the new locality, and the cyst is retained where accident allots it space. Thus, like a parasite, it ultimately derives its nourishment and fosters its growth from the part which unwittingly accedes to the necessities of the conqueror.

CASE 1.—Mrs. W——, aged forty-five, married twenty years, thirteen children, youngest three years old, was admitted to the General Hospital on July 1st, 1882, with the following history: She stated that she had always had good health until March, 1881, when she noticed an enlargement of the abdomen, chiefly on the right side; this continued to increase in size. Six months later, while nursing and lifting a sister who was ill, she was suddenly seized with violent pain in the abdomen and was obliged to go to bed. This was followed by an attack of inflammation of the bowels, which caused her to keep her bed for several months, she was very feverish, and had occasional shiverings. The abdomen became much reduced in size, but still swollen and tender, and in March, 1881, a large abscess formed below the navel, which, pointing outside, was opened by the doctor and several pints of matter let out. This discharged for some weeks and ultimately closed. Still a large lump remained; it was not particularly painful, but she was feeble and unable to work. Menstruation had been regular. On examination the patient was thin but otherwise healthy-looking. The abdomen was not tense; a little to the left and one inch and a half below the umbilicus was a depressed cicatrix an inch long. On palpation a rounded mass was felt about the size of a small cocoa nut, the bulk of which was to the right of the median line, the upper border being a little higher than the level of the umbilicus. Fluctuation was indistinct; it was smooth and evidently adherent to the inner aspect of the abdominal wall. The uterus was free; there was nothing abnormal in the pelvic roof; there was no albumen in the urine. On July 12th the abdomen was opened in the middle line by an incision three inches long through somewhat dense tissue, when a cyst was found adherent to the abdominal wall, the omentum, and on the left to about four inches of small intestine. The adhesions were separated and the cyst removed; there was no pedicle, and on examining the pelvis the right ovary was absent. The Fallopian tube could not be traced. The patient made a good recovery. The cyst weighed nine ounces and a half, was crinkled, dull, and dense, its walls were an eighth of an inch thick, irregular, and the interior contained about nine ounces of thin grumous fluid. It would appear that there was originally a large cyst; that this, probably containing clear fluid, had ruptured, giving rise to the inflammation of the bowels spoken of by the patient; that the cyst diminished in size, became adherent to the place I have mentioned by the activity of the inflammatory action; that, becoming fixed, it gradually dragged away from its attachment to the broad ligament, this stretching being favoured by the constant movement of the intestines, until at last it established itself by a prescriptive right of possession to the new situation it had acquired. Probably as a result of the inflammation of its walls, and in some measure owing to the low vitality its connexion must have permitted, there was free suppuration in the interior, which, finding its way in the direction of least resistance, the pus was let out when it showed signs of coming through the abdominal wall. After this there was an abeyance of acute symptoms, but the tumour remained with a future before it upon which we may speculate as probably that of a passive existence.

CASE 2.—Miss S——, aged eighteen, pale, strumous-looking, stated that she was brought up in the country until a year ago, when she came to live with some relatives in Birmingham. Before leaving home she had a bad attack of "inflammation of the bowels," and was confined to bed for some weeks; since then she has never been well and strong. Has been irregular, and suffered from occasional attacks of pain in the lower abdomen and right side; this was always most during menstruation, obliging her to lay by for some days. On Oct. 23rd, 1882, she got wet, and went to bed with indications of an ordinary cold. On the 25th she had a shivering with acute pain in the abdomen. Dr. Lewis was sent for, and the pain relieved by hot fomentations and opium. On the 26th I saw her with him; she then had constant sickness, pain and tenderness over the abdomen, particularly in the right iliac region; quick pulse and high temperature. Per vaginam the uterus was fixed, the pelvic roof hard throughout; by the rectum the pelvic contents were represented by a general hardness, through which definition was impossible. Her urine was free from albumen. On the morning of the 28th she was seized suddenly with an intense aggravation of the abdominal pain, with collapse. The abdomen was distended and exquisitely tender; there were profuse sweating and general torpor, the tongue dry, pulse 130, temperature 102° F. She never rallied, and died on the 29th at 1 P.M. On the following morning a post-mortem was made by Dr. Lewis. On opening the abdomen there were signs of general peritonitis; the intestines were dull, slightly adhering in some parts, more firmly in others, with here and there patches of recent lymph. On the right side of the pelvis the parts were matted together by inflammatory adhesions. To the inner aspect of the cæcum, adhering to it, to the omentum, and to the adjacent coils of small intestines, was a cyst the size of an orange, smooth where not attached, and tailing off with a band like a pedicle into the thickened mass on the right of the uterus, in which by careful dissection no trace of an ovary could be found. The cyst contained between two and three ounces of thick yellow pus, and at its lower part was a small opening through which this had ruptured into the peritoneum. The cyst wall was dark leaden-coloured, about two lines thick, denser in some parts than others; and over one side could be traced a band, which terminated irregularly like the end of the Fallopian tube. The inner surface was roughened and irregular. The left ovary was enlarged, and the Fallopian tube on that side distended and containing pus. The uterus was small and hard, intimately connected by adhesions with the rectum and surrounding parts. Read by the light of this history, the explanation seems to be that this girl had an ovarian cyst, which became adherent during the attack of the so-called inflammation of the bowels a year before; that it subsequently suppurated, and was associated with a condition of chronic pelvic peritonitis; that it became separated and transplanted, eventually ruptured and caused death. That such a state of parts in the pelvis is not inconsistent with a tolerable condition of health and ability to pursue the ordinary avocations of life we have occasional clinical knowledge. One case I remember seeing at the post-mortem of a young person who died of peritonitis after a few days' illness: the ovary was dilated and filled with pus, which had burst into the peritoneum. The abscess of the ovary was evidently of old standing, and yet within a week of her death the patient was going about as usual.

CASE 3.—Mrs. T——, aged thirty-three, fair and healthy-looking, four children, the youngest five months old, came as an out-patient to the General Hospital on Oct. 27th, 1882, with the following history:—She stated that her health had always been good until after the last confinement, when she noticed a swelling on the right side of the abdomen, which was gradually getting larger; it was not painful, and only affected her by the inconvenience of its bulk. On examination, the abdomen was smooth and tense, larger in the right

half, fluctuating throughout; no solid matter felt. The uterus was drawn up to the right, and measured three inches; no albumen in the urine. Diagnosed large unilocular cyst of the right ovary. The patient was advised to wean her baby, and come again in a month's time for operation. She was admitted into the hospital on Jan. 5th, 1883, having written to say that she had been detained by a bad attack of "inflammation of the bowels," for which she had been in bed a fortnight; this came on suddenly in the night, after going to bed in her usual health. On examination, I was struck with the change in the appearance of the abdomen from the time of her last visit. Instead of a uniform distension, smooth, tense, and fluctuating, there was now a prominent bulging in the middle of the abdomen, below the umbilicus. This was manifestly adherent to the inner wall, the surrounding parts being lax, and the skin quite loose. It was about the size and shape of a "Rugby" football. On Jan. 11th the cyst was removed. It was adherent to the anterior abdominal wall, the omentum, and to about three inches of small intestine; its lower border was connected by a pedicle which had rotated round from the right forwards, and over to the left for about three turns, presenting the appearance of a twisted umbilical cord. The connexion with the broad ligament and right side of the uterus was shelled off by the fingers from an area of organising extravasation; there was no ovary. The cyst was olive-green coloured, smooth externally; it weighed thirteen and a half ounces, and contained seventy-four ounces of port-wine coloured fluid; its walls were thick and puckered, its interior irregular. A glass drainage-tube was put in the abdomen and retained for five days, during which time eight ounces of sanguinolent fluid were taken away. The temperature was never more than a little over 99°, and the patient has made a capital recovery. A similar explanation is applicable to this case from the course in which events were noted with a reasonable probability of sequence. There was a large thin-walled cyst; this ruptured in the night; the cyst collapsed and became twisted round on its pedicle; peritonitis succeeded from the quantity of escaped fluid, then came adhesion, arrest of circulation by the torsion with transudation of blood in the interior, and final separation with transplantation away from the primary source.

CASE 4.—Mrs. P——, aged thirty-three. This case is recorded in THE LANCET of April 14th, 1877, p. 529. There was a large single cyst which was tapped on Feb. 18th, sixteen pints of fluid being withdrawn; on March 3rd it was removed, the patient making a good recovery. In this case the pedicle was rotated for two complete turns; there were recent adhesions to the omentum, anterior abdominal wall, and small intestine. The cyst weighed 1 lb. 9 oz., was shrunken, dark livid coloured, and contained half a pint of dark coloured fluid. Here the mechanism by which the result was produced was identically the same. A large single cyst was tapped; it collapsed, drifted from its moorings; under the influence of soft elastic pressure from constantly moving intestines it became twisted round on its stalk; peritonitis gave the conditions for the adhesion which was present, and transplantation was practically complete. The twisted pedicle no longer afforded a link for the vital connexion, but, with the principle of true conservative reparation, delayed its final separation, while the cyst was forming adhesions by which it was destined to find an independent existence.

CASE 5.—F. V——, admitted to the General Hospital on Feb. 17th, 1883, with the following history. Has been ill for two years with pain in the left side of the abdomen, which has been gradually increasing in size. Sixteen weeks ago, while sitting still she was suddenly seized with pain in the abdomen; this was followed by an attack of severe inflammation of the bowels, for which she has been in bed ever since. Five weeks ago she was seen by an eminent surgeon, who diagnosed hæmatocele, and aspirated through the abdominal wall; rather more than six pints of dark-coloured fluid, mixed with blood, were taken away. The pain and swelling still continued. On admission the abdomen measured thirty-one inches round; from the umbilicus to the left superior spine, five inches and three-quarters; to the right the same. On Feb. 22nd, the abdomen was opened, and a cyst formed of the right ovary was found adherent to the abdominal wall, the omentum, and about four inches of small intestine. The walls were about one-eighth of an inch thick, and dark-olive-green coloured; the cyst weighed 1 lb. 3 oz., and there was about five pints of port-wine-looking fluid in the interior. The pedicle was twisted two and a half times, was friable, and easily disconnected from its attachment, which was in the process of separation. The abdomen was drained and dressed antiseptically. She made a good recovery.

In the cases I have narrated it will be seen that the four operated upon recovered, that there was a close similarity in the history as given in the accounts of the patients themselves, and in the symptoms exhibited. In the remaining one it would have been hopeless to have attempted any operation from the extent of the chronic pelvic peritonitis which was lighted up by the rupture of the pus-containing cyst, and the extreme condition of the patient at the time the consultation took place. That large thin-walled cysts may burst, giving rise to temporary disturbance, and ultimately disappear, is now well known, but that under certain conditions transplantation may take place there has not been as far as I know any clinical record. In the *Edinburgh Medical Journal* for January, 1861, is a paper by Professor Turner, of which he was kind enough to send me a copy. He there relates a case found in the dissecting room in a woman aged seventy-nine, where an ovary the size of a fœtal head was transplanted to the peritoneum covering the first and second lumbar vertebræ. He also quotes an essay by Rokitansky upon the same subject, mainly setting forth the effect of peritoneal inflammation in intra-uterine life. In a paper on mesenteric and omental cysts by Mr. Knowsley Thornton, in the *British Medical Journal*, December 23rd, 1882, is a case which appears to be in support of my observations; a left dermoid cystic ovary was twisted off from its pedicle and became adherent to the omentum on the right side from which its nourishment was derived.

Birmingham.

ON

AIR-INFLATION OF THE BOWEL AS A RULE OF PRACTICE IN THE OPERATION OF LEFT LUMBAR COLOTOMY.

BY EDWARD LUND, F.R.C.S.,

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AT a recent meeting of the Royal Medical and Chirurgical Society, I had the honour to exhibit some instruments which I have invented for facilitating the operation of left lumbar colotomy. These have since been perfected by Messrs. Mayer and Meltzer, and are shown in the woodcuts, as follows:—

In Fig. 1 A is an air-syringe and rectum tube for inflating the colon during the operation, and rendering it more visible and prominent at the bottom of the wound; and such an instrument will be found useful for air-inflation of the bowel

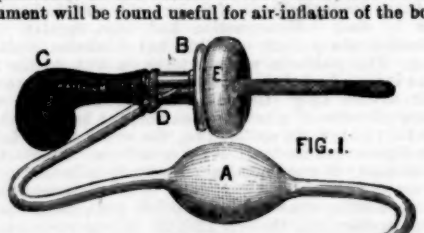
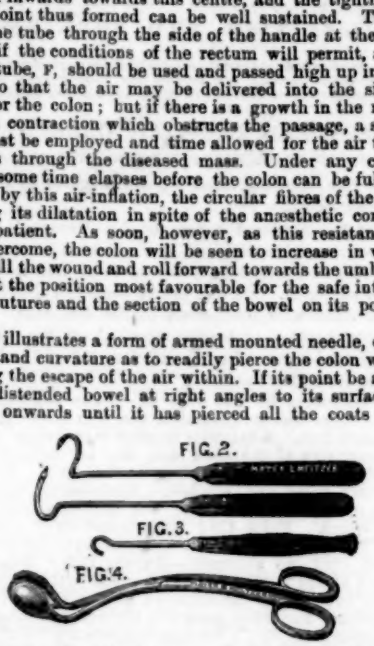


FIG. I.

in cases of suspected intussusception, or obstructed intestine from other displacements. The merit of the invention consists in a particular mode of securing an air-tight contact around the margin of the anus, by the use of a hollow elastic ring, E, placed over the tube, which is compressed and flattened against the shoulder, B, on the handle, C, when firmly pressed against the part by an assistant. This method of preventing the return of the air as it is pumped into the bowel is more effective than anything of the nature of a plug or tampon introduced within the rectum, even if it be carefully adjusted to the size of that cavity, for the air so injected is sure to escape by the side of the plug, the anus and rectum being immensely expansible, and yielding to pressure from within, almost indefinitely. This dilatability of the anal aperture is proved in the manual exploration of the rectum, occa-

sionally resorted to for diagnostic purposes. With the apparatus here described, when the hollow ring is compressed, the central hole in it is diminished in size, the skin around the anus, to which the indiarubber clings with great tenacity, is drawn inwards towards this centre, and the tightness of the air-joint thus formed can be well sustained. The air enters the tube through the side of the handle at the point D, and, if the conditions of the rectum will permit, a long narrow tube, F, should be used and passed high up into the bowel, so that the air may be delivered into the sigmoid flexure or the colon; but if there is a growth in the rectum or much contraction which obstructs the passage, a shorter tube must be employed and time allowed for the air to pass upwards through the diseased mass. Under any circumstances some time elapses before the colon can be fully expanded by this air-inflation, the circular fibres of the bowel resisting its dilatation in spite of the anæsthetic condition of the patient. As soon, however, as this resistance has been overcome, the colon will be seen to increase in volume and to fill the wound and roll forward towards the umbilicus, into just the position most favourable for the safe introduction of sutures and the section of the bowel on its posterior aspect.

Fig. 2 illustrates a form of armed mounted needle, of such a shape and curvature as to readily pierce the colon without allowing the escape of the air within. If its point be applied to the distended bowel at right angles to its surface, and pressed onwards until it has pierced all the coats of the



intestine, a semi-rotatory movement of the handle will then cause the point to emerge at a convenient distance, without danger of the needle passing between the layers of the bowel in the loose tissue external to its mucous membrane. The needle is next threaded with a long silk suture and withdrawn, and the shaft of the needle being very strong and of a conical form, as it is introduced the puncture is plugged by the advance of the thicker portion, and although on its withdrawal the direction of the cone will be reversed, yet even then very little air will escape.

Fig. 3 shows a blunt hook in handle, which, introduced into the colon through the incision in the bowel, will be found useful for seizing the suture-thread within the colon and dragging it out, a proceeding which is sometimes a cause of delay at this stage of the operation.

Fig. 4 shows a pair of curved forceps with spoon-shaped ends, very serviceable in the after-treatment of colotomy cases for the removal of the hardened masses of fæces which are apt to accumulate below and above the artificial opening. These forceps can be passed through the wound without pain to the patient, and the fæces removed with great ease.

In the operation of colotomy, after the preliminary incisions have been made, I am very careful to smear freely over the cut surfaces an abundance of carbolated oil, so that when the bowel is opened and the fæces escape, the divided surfaces of the wound may be mechanically protected and future irritation avoided. I also employ vaseline and eucalyptus (one-tenth) as the permanent dressing, for I have found it to decrease in a marked degree, if not to entirely destroy, the unpleasant odour of the feculent discharges.

ST. JOHN AMBULANCE ASSOCIATION.—At a meeting of the Central Executive Committee held on the 30th ult., at St. John's Gate, Clerkenwell, Colonel Sir Henry Lock, K.C.B., Commissioner of Woods and Forests, in the chair, it was reported that at a recent inspection of the Egyptian Artillery at Cairo, by General Sir Evelyn Wood, the men went through a demonstration of the stretcher drill of the St. John Ambulance Association, which had been introduced by the commanding officer, Colonel F. Duncan, R.A., Deputy Chairman of the Association. The demonstration was subsequently repeated in the presence of the Khedive, who expressed himself as greatly pleased with the men's progress.

CASES ILLUSTRATING THE

SURGICAL DISEASES OF CHILDREN FROM THE HOSPITAL FOR SICK CHILDREN, PENDLEBURY.

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CASES OF NECROSIS OF THE PATELLA LEADING TO DISEASE OF THE KNEE-JOINT.

CASE 1.—Ambrose C——, aged eight years, was admitted in December, 1881. In June of the same year he fell from a wall, but did not feel any serious ill effects till a month later, when his knee swelled and he became lame; there was also some redness and tenderness about the joint. Under treatment his condition improved, but he had not got quite well when, five weeks before admission, he was kicked upon the same knee, fresh inflammation was lighted up and an abscess appeared which discharged three weeks after the second injury. His general health somewhat failed, but he had no great amount of pain and no night startings. On admission he was a not unhealthy-looking boy. The right knee was considerably swollen, but the swelling was almost entirely limited to the tissues around the joint, there being but little effusion apparent within it. Three sinuses were seen on the front and sides of the knee, and these freely communicated with one another. A few days after admission the sinuses were slit up and drained and the limb fixed upon a back splint. He did fairly well for a week, when the knee became more swollen and tender, and the boy's temperature rose to 102°; the superficial wounds were then swabbed out with chloride of zinc, and the joint freely laid open on each side. The incisions gave exit to a considerable quantity of lymph and flaky serum. The synovial membrane was swollen, but the cartilage seemed healthy except at one circular spot, about half an inch in diameter, in the centre of the patella; here a perforation existed which ran completely through the bone and communicated freely with the openings on the front of the knee. The wounds were dressed antiseptically and pressure with sponges employed. Some burrowing of pus took place a few days later in spite of apparently free drainage. Counter-openings were then made, and the case went on fairly well, though it was questionably aseptic; the openings, however, never healed, and the sinuses assumed that indolent intractable character so common in cases of chronic joint disease in children, and, in spite of various modes of treatment, the boy at his discharge was not in a satisfactory condition. He was sent to the seaside in an immovable apparatus, and allowed to get about with crutches, but was finally lost sight of.

CASE 2.—John——, aged seven years and three months, was admitted in July, 1882. Ten weeks before he was first seen he received a blow upon the left knee, and the joint became painful and weak from that time, but there does not appear to have been any acute inflammation, and it did not discharge until five days before he came to the hospital. His health had not been so good since the accident, and there was a family history of phthisis. On admission the left knee-joint was found to be swollen and fluctuating, the swelling mapping out the synovial sacs, and bulging in the popliteal space. The skin was somewhat red, and the veins were turgid, but there was very little tenderness. A sinus, which was scabbed over, was seen over the front of the ligamentum patellæ. The limb was in good position. Six days after he came in the sinus was explored, and found to lead to the upper surface of the patella. On laying open the track a sequestrum of the size of a damson stone was found loose in the centre of the bone, and on removing it a perforation into the joint was seen. The joint was laid open freely on each side, and the finger could then feel the orifice on the articular surface of the patella, corresponding to the external opening. Much thin serous fluid and solid creamy masses of coagulated lymph were squeezed out of the joint. The operation was done under carbolic spray, and rubber drainage-tubes and sponge pressure employed with the usual dressings. The temperature did not reach 100° after the second day from the operation, and he was discharged with a small superficial wound at the end of August, eight weeks

after admission. Soon after his discharge passive movement was attempted, but there was still a good deal of swelling about the joint, and not much progress was made. In October he was put under chloroform and the joint examined; it was found that very firm and extensive adhesions had formed within the joint, and it was finally decided that these and the continued thickening of the tissues made it wiser not to attempt anything better than a straight stiff limb, especially as the remains of the patella were fixed somewhat firmly to the femur. The wounds were all at this time soundly healed. He was seen again in January, 1883, and the limb remained in much the same condition, a good deal swollen, but painless and slightly movable. The wounds had remained sound.

Remarks.—In THE LANCET for September, 1878, Mr. Gay records a case in which he removed the whole patella for necrosis. In this case the bone was apparently bare, except that a portion of the articular cartilage remained undetached. Mr. Gay gives references to four other cases: (1) That of Thirion of Namur; here, too, the whole patella in a young subject was removed for necrosis after a fall, the patient being of strumous constitution. In this instance, as in my cases, the patella appears to have been perforated, though a much larger part was removed than in my patients. The joint was found full of granulation tissue, and the limb ultimately was apparently in nearly the same condition as in my second case.[1] (2) Knode, of Missouri, published a case in which after a fall on ice some sloughing of the skin, and ultimately necrosis of the patella, followed. The whole bone was removed, the cartilages of the joint at the time of operation were apparently normal, and the limb recovered a great part of its natural mobility. (3) Mr. Wood, of King's College, removed the whole patella as a loose sequestrum from a girl aged seven. Here the necrosis was pyæmic. (4) Dr. Gross, of Philadelphia, has also removed the patella for necrosis after frostbite. The patella has also been excised for dislocation of the bone, with consequent pain and uselessness of the limb.[2] Mr. Erichsen, in his book, mentions a case where necrosis of part of the patella followed a fracture, and the sequestrum was removed by him with good result. I can find no cases other than those recorded. Periostitis of the patella from injury resulting in exfoliation is, I imagine, not a very rare condition; and though I have not found a record of a case, I have been informed by Mr. Clegg, one of the house-surgeons at the Manchester Infirmary, that he remembers seeing an instance at the out-patient department some eighteen months ago. Syphilitic periostitis is certainly not very uncommon; two well-marked cases I have seen myself, but these were not followed by necrosis. I have not, however, been able to find any record of cases corresponding exactly to mine, where, it appears, osteomyelitis of the ossifying nucleus of the patella occurred, leading simply to a circumscribed perforation of the bone, and consequent destruction of the joint. The opening in each case was singularly defined and circular, and surrounded apparently by healthy cartilage. In the first case the opening was small, perhaps half an inch in diameter, and probably the whole of the ossified part was not destroyed; no actual sequestrum was found. In the second case a sequestrum was removed, and the perforation was somewhat larger than in the first boy. The condition I have ascribed to osteomyelitis, and this I think most probably correct. I should compare it to the common epiphysitis we see in children; it is, however, no doubt quite possible that the primary condition is periostitis, which, from the greater vascularity of the ossifying centre, affects the bone rather than the adjoining cartilage. There was no reason to suspect a syphilitic taint in either case.

I am indebted to the resident medical officer for the notes of these cases.

[1] Vide THE LANCET, 1829.
[2] Vide Fowler, in THE LANCET, 1871, vol. i.

KILDARE COUNTY INFIRMARY.—The half yearly presentment for the support of this infirmary having been thrown out at Presentment Sessions, an application was made recently at Kildare Assizes, before Chief Justice Morrias, for a rule, that the Grand Jury were now competent to entertain the presentment. His lordship ruled that the sum of £500, the amount presented for, having been disallowed at the Presentment Session, it was not competent to enter upon it; but he gave an order that the salary of the surgeon, Mr. Samuel Chaplin, amounting to £47 for the half year, should be passed.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

TWO CASES OF ULCERATIVE ENDOCARDITIS; NECROPSY.

FOR the following notes we are indebted to Dr. Penny, house-physician.

CASE 1. (Under the care of Dr. Curnow.)—William McC——, aged twenty-nine, was admitted on August 10th, 1882. He had ague nine years ago, and had had a cough for the past year. He was in the Seamen's Hospital at the end of June with pneumonia of the left base. Nothing abnormal could then be discovered about the heart. On August 4th he was taken ill with "ague" and had shivered several times afterwards.

On admission he was very ill; pulse collapsing. The heart's apex beat was found in the fifth space just inside the nipple line. A diastolic murmur was plainly audible to the inner side of the apex beat, and an indistinctly murmurish sound with the systole at the apex. Respiration was very rapid and shallow. Some moist sounds were heard at both bases. There was prolonged expiration at both apices. Pulse 130; temperature 100·2°; respiration 60 to 70. Spleen felt just below the margin of the ribs. Urine, sp. gr. 1022, no albumen.—August 12th: Heart sounds muffled at apex. No distinct murmur could be made out. Second sound very accentuated at the base. Pulse still collapsing. Fine râles generally through the chest. Morning temperature 99·1°; evening temperature 101·2°. — 13th: Much worse. Physical signs as before. Morning temperature 100°; evening temperature 100·6°. — 14th: Respiration very rapid and distressed. Physical signs as before. Morning temperature 100°; evening temperature 101·6°. Urine, sp. gr. 1018. A slight amount of albumen now present.—15th: Much cyanosis. Bowels open for first time since admission, loose. Morning temperature 101°. Died 3.30 P.M.

Necropsy.—The heart weighed fifteen ounces, relaxed, left ventricle dilated and hypertrophied. A large rounded mass of worm-like granulations depended from the angle of junction of the posterior and the left anterior segments of the aortic valve, and from the adjoining left half of the left anterior segment, this latter structure being enormously stretched; so that while the worm-like mass hung from its ventricular surface its aortic surface formed a cup-like hollow, in the centre of which two perforations had occurred, extending through the valve and through the mass of granulations beneath and opening into the ventricle. The granulations formed a mass of the size of a large hazel nut, and almost filled up the aortic orifice. Below the line of attachment of the base of the affected valve the tissue of the ventricle was much softened and pulpy, and from this ulcerated patch extended upwards in the middle coats of the aorta, a condition of extreme softening of the tissues, so that a probe could be easily passed along the softened tract. About one-third of an inch above the aortic orifice the probe thus passed entered the cavity of the aorta through an ulceration of the inner aortic coats, about a quarter of an inch in length, while exactly opposite this ulcer on the other side of the aorta was a smaller deep ulceration, quite unconnected with the softened tract running up from the heart, and extending nearly through the whole thickness of the aorta, leaving only a thin part of the outer coat intact, and this, dark in colour and bulging outwards, formed a minute aneurism which must soon have ruptured had life continued. The remaining valves, including the parts of the aortic not mentioned above, were quite healthy, and no sign of old-standing mischief could be found. The lungs were bulky, showing here and there star-like patches of pigmented fibroid tissue; tubes rather dilated; some of the lung tissue highly congested and almost airless; left lung adherent all over; spleen much enlarged; a single large wedge-shaped recent embolic patch in upper part; kidneys seemed healthy; liver

rather soft; mucous membrane of stomach showed some small ecchymoses; the brain was normal.

CASE 2. (Under the care of Dr. Carrington.)—Horace L——, aged twenty-two, ship's steward, was admitted July 19th, 1882. The patient had scarlatina when ten years old, followed by dropsy, and (according to the doctor) heart disease. When fourteen years old he had rheumatic fever. He has also had small-pox and yellow fever. On July 13th he became ill with diarrhœa and pains in the head and chest, and delirium at night.

On admission he was too ill to give any account of himself. The heart's apex beat was found in the sixth space, two inches outside the nipple line. A very loud systolic murmur was heard over the aortic valves and upwards and to the right over the ascending aorta, though with diminishing loudness downwards over the cardiac area, but becoming again somewhat intensified near the apex. A diastolic murmur was also present at the base, heard downwards along the sternum. Cardiac pulsation very marked; pulse very collapsing, 116 per minute. Spleen felt about an inch below the margin of the ribs. Liver dulness extended two inches below the rib margin in the nipple line. Respiration very hurried (48 per minute); coarse breath sounds both sides. Complexion sallow, almost yellowish; sordes on lips, tongue dry and brown. Urine, specific gravity 1010, contained albumen in large amount, but no bile, and gave a doubtful reaction with the guaiacum test for blood; temperature 103° F.

July 20th.—Morning temperature 101·8°; pulse 128; respiration 56. Urine gave a decided blood reaction; no casts discovered. Evening temperature 102°; pulse 138; respiration 65.—21st: Morning temperature 101·2°; evening temperature 101°. Died 10 P.M.

Necropsy.—Pericardium contained about an ounce of blood-stained fluid. The heart weighed twenty-six ounces, and was enormously dilated and hypertrophied on both sides; the aortic valves were shrunken, contracted, and highly incompetent. The mitral orifice was contracted, and only admitted two fingers. On the posterior wall of the left auricle was a round patch of ulceration about the size of a shilling; its lower margin touched the rim of the mitral orifice along the posterior border, of which a thin line of ulceration extended, running about half-way round the opening. On the ventricular aspect of the larger mitral valve was a second patch of ulceration about the size of a threepenny piece, which extended upwards into the angle between the two corresponding aortic cusps; a third, and yet smaller, ulceration occupied the angle between the two anterior aortic cusps, extending downwards slightly on to the ventricular septum. The surfaces of the ulcers presented a similar appearance, being uneven, indeed, almost flocculent, and not sensibly depressed below the general surface. The lungs were adherent on both sides by old adhesions; both lungs highly congested and œdematous, the greater part sinking in water and almost pneumonic in appearance. The liver was large, pale, soft, and opaque; a few ecchymotic points in the interior. Spleen much enlarged, almost diffluent; presented several large recent embolic patches. The kidneys weighed fifteen ounces, soft, so that the capsule, unless carefully removed, tore away the cortex. On section the organs presented thickly scattered points of ecchymosis, each spot being surrounded by an area of intense injection, the bases of the pyramids and the cortical portion being chiefly affected. Several firm, yellowish bands of tissue ran through the cortex, extending from the base of the pyramid to the surface (? old infarcts). The mucous membrane of the stomach showed numerous petechiæ; membranes of the brain injected.

SUSSEX COUNTY HOSPITAL.

TWO CASES OF POPLITEAL ANEURISM.

(Under the care of Mr. BLAKER.)

FOR these notes we are indebted to Mr. B. Scott, house-surgeon.

CASE 1. *Popliteal Aneurism cured by Compression of the Femoral Artery.*—R. G——, aged forty-two, bricklayer, was admitted September 4th, 1882, with a pulsating swelling in the right popliteal space. Pain and swelling came on about two months previous to admission. For the last three weeks he had stayed in bed, owing to increase of pain. The pain had kept him awake at night. He had had rheumatic fever. There was no history of how to account for the trouble.

On admission the following notes were taken. There is a swelling about as large as one's fist in the right ham. It can be felt pulsating behind and through the muscles on the inner side of the knee. It descends very low down between the heads of origin of the gastrocnemius. It is four inches and a half in length and three in breadth. There is a distinct aneurismal bruit. The leg is hotter on this side. The subcutaneous veins are enlarged. The tibial arteries at the ankle beat indistinctly. There is pain in the upper end of the tibia. The general health is good. To be kept in bed with his leg resting on its outer side on a pillow, and flexed at the knee; and to have the ordinary meat diet.—Sept. 9th: The swelling is rather smaller. Fish diet ordered.—13th: Swelling harder and smaller. He now has a pint of gruel or arrowroot, a pint of beef-tea, and a pint of milk in the twenty-four hours.—20th: The aneurism is to be treated by compression applied to the femoral artery. The skin over the artery has been shaved, and sweet spirits of nitre has been rubbed in daily of late. The course of the vessel is marked out. Compression is accomplished by means of a thick brass wire, straight except at the top, where there is a gentle curve. To its lower end is soldered a circular piece of lead, convex below. This is padded thickly with wash leather. The apparatus is placed on the artery and lead weights are slipped on to the wire. It is kept in place by being tied with bandages round its curved upper end on to a body cradle. The brass wire is a foot long. The minimum weight which stops the circulation is 14 lb. 14 oz. The whole can be made to slide up and down along the artery when it is necessary to alter its position without allowing any pulsation below. Five inches of the femoral artery below Poupart's ligament are available in this way.—21st, 10 P.M.: Compression, which has been continued now for thirty-six hours, is stopped. The tumour is hard, smaller, and quite free from pulsation. The patient has had very little inconvenience from the treatment. The weight has been shifted every quarter of an hour. It has been quite needless to give any sedative. He is an exceptionally good patient.

Oct. 12th.—He has not yet got up. The tumour decreases and is hard. No recurrence of pulsation. His diet is now being gradually increased.

Nov. 26th.—To-day he gets up for the first time. He has no pain now. The aneurism is felt converted into a hard non-pulsatile sausage-shaped tumour.

Nov. 28th.—Left the hospital.

CASE 2. *Popliteal Aneurism cured by Manipulation and Rest.*—C. W——, aged thirty-seven, labourer, was admitted on Nov. 24th, 1880, with an aneurismal swelling in the right popliteal space. He was a fairly healthy man; pulse 72, rather hard; had been married twelve years; had had no children. He had a sore on the penis twenty years ago, of which the scar remained. There was no history of any secondary symptoms. About six weeks before admission, after walking about on a very wet day, he noticed pain at the back of the right knee. He discovered very soon afterwards a swelling there. This has never gone. He has continued doing his work.

On admission the following notes were taken:—There was a hard pulsating swelling felt in the popliteal space. It was about the size of a walnut. The tumour expanded from side to side. There were no signs of inflammation. It felt as if it contained some clot. No bruit was heard. On raising the limb the pulsation was diminished, and less force was required on the femoral artery to stop the pulsation.

Nov. 26th.—Yesterday the limb was raised, and the tumour manipulated in various ways. To-day the pulsation has ceased entirely, and the tumour is harder.

Dec. 1st.—There is no pulsation, and the tumour is still more hard.

Jan. 12th, 1881.—There is now a small hard cord in the course of the artery.

On Feb. 5th he left the hospital.

DANGERS OF FOOTBALL.—At Birkenhead, last week, during a football match a young player was running with the ball when he was "collared" by an opponent and thrown violently to the ground, falling on the back of his neck and injuring the spine. Paralysis of nearly the whole of the body immediately ensued, and he was removed to the Borough Hospital, where he shortly afterwards expired.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Discussion on Diabetes.

THE ordinary meeting of the above Society was held on Tuesday last, April 3rd, Mr. J. W. Hulke, F.R.S., President, in the chair. The discussion on diabetes was opened by Dr. S. Wilks, and joined in by Dr. Ralfe, Dr. Finlay, Dr. Hale White, and Dr. Stephen Mackenzie. To a large extent their speeches were negative rather than positive, and the only theory advanced was one by Dr. Ralfe, that diabetic coma is caused by the production of aceto-acetic acid in the blood. The honorary secretary showed for Dr. Hamilton an excellent specimen of lipæmia. The discussion was adjourned till May 1st.

Mr. HULKE prefaced the discussion by remarking that although certain morbid changes had been observed in cases of diabetes, he did not know whether these were peculiar to diabetes, and if so, how far they were causal. He hoped that the discussion would be limited to diabetes mellitus, and that cases of polyuria, and of that form of saccharine diabetes which occurred in elderly persons, and lasted often times for years without producing any ill-effects, would not be considered along with the cases of the severe and acute form of the disease.—Dr. S. WILKS had no new facts to advance, but yet he considered that this subject was one well suited for discussion. He thought that all the anatomical changes found in diabetes were results of some ulterior factor, but it was the part of this Society to record all such anatomical facts. He well remembered Dr. Bernard's original experiments on the artificial production of glycosuria; but so far as his own experience went, he had not found any changes in the fourth ventricle in patients who had died from diabetes. He referred also to Dr. Ogle's statements in reference to the spinal cord, and suggested that some facts in relation to the sympathetic centres might be discovered if carefully sought for. Also, he was interested to know how the liver was changed. Whether it was enlarged merely or altered in structure in any way. The pancreas, too, had been stated to be affected; the stomach and kidneys also deserved notice. The kidneys had an increased function thrown upon them, and it was interesting to know whether this was always attended with true hypertrophy. The skin had been said to be altered. He remembered seeing a patient bled, and the whole surface of the blood was covered with fat; and this point had recently come up afresh. His impression was very strong that twenty years ago he should have said that diabetic patients died from phthisis; whereas now he would say they died from coma, and it would be interesting to know whether there was any change in this matter and what the facts really were. He asked, too, whether, when diabetics died from lung disease, that disease was special in its nature or ordinary tubercular phthisis.—Dr. RALFE said he would limit his remarks to the question of acetonæmia. He distinguished between two forms of diabetic coma, to the latter, by far the rarer of the two, he thought the term acetonæmia should alone be applied. He regarded it, however, purely as an accident in the course of the disease, and not at all as a natural sequence. After describing the characteristic symptoms of this condition, he drew a parallel between acute diabetic coma or acetonæmia and those of acute yellow atrophy and phosphorus poisoning. The sudden, sharp epigastric pain, accompanied with gastric disturbance, often with vomiting, the vomit sometimes containing blood; the peculiar dyspnœa, which had been likened to the panting of an animal in which both vagi had been cut; the stage of short, noisy delirium followed almost suddenly by deep coma; the fall in temperature as the nervous symptoms developed; the irregular pulse finally becoming intensely rapid as the coma deepened—are all symptoms common to acetonæmia and to acute yellow atrophy and phosphorus poisoning. He doubted whether acetone was ever found free in the blood, though there was no doubt of its existence in diabetic urine. He believed, however, that the blood contained some body that yielded acetone readily on decomposition. This body some had supposed was ethyl-diacetate, but more recent investigations had shown that it was probably aceto-acetic acid. If this was ultimately proved, then we might offer an explanation (1) of the highly acid condition of urine so frequently associated with diabetes; (2) the lactescent condition of blood, since acetic acid will give a milky appearance when agitated with a dilute and slightly alkaline mixture of fatty matter at 100° F.; (3) the intense fatty degeneration so noticeable in cases of acute diabetic coma; since it was well known that the injection of acids into the blood of animals leads to increase of the fatty matter in the blood, and of fatty infiltration in the tissues and organs. Dr. Ralfe here again pointed out the parallelism between acetonæmia and acute yellow atrophy and phosphorus poisoning, and alluded to a case quoted by Professor Gamgee of acute diabetic coma with lipæmic condition of blood, in which the liver was the seat of intense fatty infiltration similar to that observed in cases of poisoning by phosphorus. He thought there was no ground for doubting the presence of aceto-acetic acid—given glucose in the blood—since it was one of the many products of alcoholic fermentation. In conclusion, he thought we might be warranted in regarding this acute form of diabetic coma as due to a toxic agent; that this agent was of an acid nature; that it was formed from the alcoholic fermentation of the glucose in the blood; that in small quantities it was present in all cases of diabetes, giving to the urine the highly acid reaction so characteristic of the disease; that occasionally and on rare occasions it is sometimes formed to an excessive extent, or its excretion is interfered with, in which case it gives rise to symptoms closely parallel with those observed in acute yellow atrophy, &c. Dr. Ralfe thought that if it could be shown that acute diabetic coma depended on a toxic condition, and was not due to any sudden nervous lesion, then the treatment should be directed towards altering the percentage composition of the blood with relation to the toxic agent, which he thought would be best effected by transfusion, either with blood, or even simple water, or a dilute saline solution, whilst endeavours should be made to rouse the patient and promote full action of the skin, which he thought could be attained by use of the cold pack, &c. Dr. Ralfe then demonstrated the presence of acetone in diabetic urine with ferric chloride and with the iodoform reactions, and described briefly how acetone could be quantitatively estimated in a given quantity of urine.—Dr. FINLAY showed microscopic sections of lung, kidney, liver, brain, and spinal cord from a case of diabetes which he had had under his care a few months ago in the Middlesex Hospital. The patient died comatose on the second day after admission. The history of diabetes was of only a month's duration; the urine contained 5 per cent. of sugar. On the morning of the second day after admission he complained of difficulty of breathing, and became restless and somewhat delirious. When seen at 2 P.M. his breathing was laboured and stridulous, and he was in a semi-unconscious state with a dry and brown tongue, but no sour smell in the breath. Percussion resonance over the chest was normal, and the breath sounds merely harsh. He sank into a comatose condition, and died at 7.15 P.M., about ten hours after the graver symptoms set in. At the post-mortem examination, which was made by Dr. Fowler, the muscles were found to be of a dark-red colour, the mesenteric glands slightly enlarged, the lungs engorged and friable, and the pancreas the seat of a small hæmorrhage. The liver appeared normal, weighing 52¾ ounces; the spleen was small and pale, and the kidneys were normal with the exception of slightly adherent capsules. The pia mater was injected; the brain substance was firm, and appeared in every respect normal to the naked eye, as were also the cord and its membranes. The blood shaken up with ether yielded no fat, and microscopically examined appeared perfectly normal. With regard to the specimens shown, taking the organs in order, the lung tissue was seen to be normal, in particular no fat embolisms being present. Although there were a few rounded bodies which stained black with osmic acid, these were in the alveoli, not in the vessels, and were probably fattily degenerated epithelium cells. The kidney showed granular degeneration of the secreting epithelium and some hyaline casts in the tubules. The liver cells were granular and ill defined. No dilatation of capillaries was observed. As to the nervous centres, sections from the pons and medulla showed to some extent the cribriform appearance described by Dr. Dickinson, but the excavations were small, and not common to all the arteries. Some of these were taken to be the result of the

manipulation of the sections in cutting and mounting; and as to the rest, it might fairly be questioned whether they were not more likely to be the consequence than the cause of the disease. There was nothing noteworthy in the condition of the cord, the central canal appearing natural. In the record of the case there seemed nothing to suggest an essential pathology, and he thought it would be unsafe to do so until we had a much larger store of post-mortem records, with microscopic examinations of all the viscera, which might be concerned in the causation of the disease. His colleague, Dr. Coupland, and himself had searched the post-mortem records of the Middlesex Hospital over a period of thirty-two years, and had found particulars of twenty cases of diabetes, of which a tabular statement and summary were given. In the course of this reference was made to the interesting fact that a well-marked case of lipæmia was observed in 1859 by the late Dr. C. Coote, Assistant-Physician to the Middlesex Hospital, who made it the basis of an elaborate paper, reviewing the whole subject, in THE LANCET, September, 1860.—Dr. HALE WHITE criticised in detail that theory for the pathology of diabetes which refers it to the existence of vacuolation in the nervous centres. In the first place, he showed that out of twenty-three post-mortem examinations at Guy's on diabetic subjects no changes in the nervous centres were detected. He exhibited microscopical sections of the nervous centres from some of them, together with the entire brain, in which it was evident that the only appearance that could in any way be called vacuolation was due to the falling out of vessels from their spaces. Sections of a healthy brain showing this false vacuolation were shown. Specimens of the true vacuolated, or "Gruyère cheese," condition, were brought forward, and in all of them it was pointed out that in the subjects from which they were taken there was no sugar in the urine; for these two reasons it was inferred that the pathology of diabetes was not to be found in any such condition of brain, which, if it did cause diabetes, would surely sometimes affect other centres, such as those of the seventh or ninth nerves, an unknown complication of diabetes. Dr. Hale White next treated of the relation of glycosuria to insanity, and gave full tables of the condition of the urine in 124 cases of insanity which he tested at Bethlem with Dr. Savage, and at the Surrey County Asylum with Dr. Paddison, and out of these only 2·56 per cent. contained sugar. This statement was contrasted with that of Dr. Dickinson, who gave the percentage at 16·65, and it was suggested that probably this difference was due to the fact that the latter had mistaken some cases in which there was abundant uric acid for glycosuric ones. Finally, it was shown that it was not a fact, as has been stated, that children with tubercle are liable to glycosuria. For these reasons Dr. White was not disposed to agree with any theory that had been put forward to connect the disease with described morbid conditions of brain.—Dr. STEPHEN MACKENZIE divided his remarks into three divisions:—(1) An analysis of a number of fatal cases; (2) the naked-eye appearances in the body after death; and, (3) the microscopic appearances in the cases examined. 1. The fatal cases in the London Hospital during eight years and a half numbered thirty-seven. Of these, nineteen were due to coma; in seven of which no disease was found after death; in three there were no signs of pulmonary or other visceral changes during life; in one pulmonary disease existed during life; in four there were signs of recent pneumonia or phthisis; and in four old pneumonia or phthisis existed (in the twelve last-mentioned cases no necropsy was made). The remaining eighteen cases were as follows:—There was cerebral hæmorrhage in one; cerebral meningitis, coma, in one; cerebral tumour in one; spinal cord disease and phthisis in one; stricture of urethra, suppurative nephritis, and coma in one; scrofulous nephritis and phthisis in one; pneumonic phthisis in nine; scirrhus of pancreas, sudden collapse, in one; gangrene of foot, death rather sudden, in one; dermoid ovarian cyst, calcified mesenteric glands (supposed to have helped herself to codeia), in one. Some remarks were then made as to the changes found in relation to cause or effect. In twenty out of thirty-seven cases there were pneumonic or phthisical changes. It was pointed out that the phthisical changes were found in two organs only, the lungs and the kidneys, organs which were placed under peculiar circumstances in this disease. The occurrence of coma in association with diabetes was next discussed, it being pointed out that it was the determining cause of death in nineteen of thirty-seven cases, excluding all cases in which an explanation, other than diabetes, would account for its occurrence. It was pointed out that the coma in the cases in which pulmonary disease was present differed in no essential way from that in pure cases. As regards its production, the various assigned causes were reviewed. In three cases of pure coma, five of coma with pulmonary disease, and ten miscellaneous cases of diabetes, examination of sections stained with osmic acid showed no fat embolisms, and no fat in the bloodvessels. The pink or laky character of the blood described by some observers was not noticed in these cases, the blood being either natural in appearance or dark, sometimes thick, sometimes fluid. An acetone odour during life, or after death, had not been observed in any of the cases. He therefore concluded that whilst fat embolisms and acetonæmia might account for the coma in some cases, they were too inconstant to serve for a general explanation. At the same time, he thought that its sudden onset, peculiar features, and absence of characteristic lesion after death, pointed to some poison developing in the body; if not acetone, possibly something of an allied nature. 2. Naked-eye appearances: He knew of none pathognomonic, but some were frequent. He had not seen the cribriform condition of the nervous centres described by Dr. Dickinson. The most frequent, besides the emaciation and phthisis, was a slimy homogeneous condition of the liver and spleen. The kidneys were usually large and often congested. The pancreas had only been found diseased in two cases: once scirrhous, once cretaceous. 3. Microscopic appearances: In fourteen cases, in which the nervous system was examined, no changes were found. In six cases slight perivascular and peri-ganglionic dilatations were found, but in none to the degree described by Dr. Dickinson. He was doubtful how far they were due to a mode of preservation. Hyaline degeneration of some of the vessels was present in some cases, and miliary aneurisms of the retina in one. In the lungs the changes were chiefly of a necrotic pneumonia. In one case only giant cells were found. Four cases had been examined for bacilli, but none were found in any of these. In six cases intra-alveolar hæmorrhagic extravasations were found; these were all cases of coma, and their occurrence was no doubt due to this cause. In the kidneys the most remarkable changes were a hyaline degeneration of the intima of the small arteries, and a peculiar skeleton-like condition of the epithelium of the collecting tubes. In the spleen a hyaline degeneration of the arteries was found in all the cases (five) examined. The liver showed signs of fatty degeneration in only one of eleven examined, a point of importance in connexion with fatty embolism. In the other cases there was atrophy of the liver cells. The pancreas was examined in four cases, but nothing of importance was found. The heart showed signs of wasting and degeneration. The morbid anatomy of these cases, therefore, was of a barren character, throwing no light on the pathology of diabetes. The changes found must be regarded rather as the consequences of diabetes than as explaining its occurrence.

Microscopic specimens of organs of patients dying with Diabetes were shown by Dr. Finlay, Dr. Stephen Mackenzie, Dr. Seymour Taylor, Dr. Hale White, and Mr. Victor Horsley.

CLINICAL SOCIETY OF LONDON.

Traumatic Gangrene.—Tetanus.

THE ordinary meeting of the Clinical Society was held on Friday, March 30th, Dr. Andrew Clark, President, in the chair. The subjects raised by the papers were traumatic gangrene and tetanus. Several cases bearing upon the pathology of tetanus were related.

Mr. HOWARD MARSH read the Report of the Sub-committee appointed to report on Mr. Shuter's case of Subperiosteal Amputation of the Hip-joint. The Committee had not evidence enough to enable them to state that there was any new formation of bone in the stump. There was, however, independent movement in the stump itself. The method employed was of advantage from (1) avoidance of hæmorrhage, and (2) the firm attachment of muscles to the periosteum.

Mr. R. W. PARKER read a case of Contused Wound of the Thigh and Leg in a Child; Gangrene of Limb; Death. A female child, aged fourteen months, was admitted into the East London Hospital for Children, having

sustained an extensive wound of the left leg twenty-four hours previously. The wheel of a heavy dray had caught the outer border of the limb and torn off a large crescentic flap of integument; the front of the knee-joint was exposed but not opened. An attempt was made to clear off the mud, with which it was plentifully covered, and so establish an aseptic condition, after which antiseptic dressings were applied. The child appeared to be doing well for about thirty-six hours, after which she became drowsy and restless, and some livid patches and œdema appeared on the foot. Twenty-four hours later these symptoms had become more pronounced, and on the following morning extensive gangrene of the limb had supervened. She died. The author sought the opinion of the members of the Society (1) on the treatment he had adopted, and (2) as to the cause of the gangrene. He felt that amputation in the upper third of the thigh, the only alternative, was a severe operation for such an infant; while the suppuration and granulation of such a wound, unless they ran an aseptic course, would almost certainly have proved fatal. As regards the gangrene, no injury to the vessels could be discovered as a cause. Could the action of the carbolic acid have produced such a result?—Mr. HERBERT PAGE referred to a similar case under his own care. A child, eighteen months old, caught his arm in a gate. The limb was cold, and next day it was obviously dead to above the elbow, with acute inflammation running up the arm. The child was very ill. Mr. Page at once amputated at the shoulder-joint, and the child quickly recovered. There was fracture of the humerus and olecranon. The brachial artery was plugged in two places opposite a rupture of the two inner coats just above the elbow. He thought that amputation was the proper course, for there was acute inflammation spreading from the gangrenous part. It was advisable not to wait for a line of demarcation. In dry gangrene in old people such a line of demarcation might be waited for.—Mr. CRIPPS agreed that it was impossible to lay down a hard-and-fast line as to the proper treatment of cases of traumatic gangrene. In some cases in which the blood-supply was entirely cut off amputation might be postponed; others were cases of spreading gangrene, of which he detailed two examples. One was that of a man with fracture of the arm and wound of the leg, and with dyspnœa. Next day the fingers were blue and swollen. This condition spread up to the elbow. The constitutional state became very grave; the pulse was small and rapid. The arm was amputated at the shoulder-joint, and the vein was seen to be occluded with a clot. Next day the leg began to show signs of gangrene in the foot, then in the leg and thigh, and the man died. At the autopsy the femoral artery was found pervious, and the vein was filled with a clot. The heart was fatty; old pleuritic and pericardial adhesions and fracture of seven ribs were also found; his circulation was feeble before the accident, and then that came to add to the difficulty of the circulation, and so caused stasis and gangrene. In such a case amputation would not have been of any use. The other case was that of a man who injured his hand. Three or four days later the hand swelled very much, and became very painful; the whole forearm was swollen; the fingers were black, the back of the hand bright red, and the pain was extreme. Temperature 104°. After twenty-four hours the arm was amputated at the shoulder-joint, and immediately there was most marked relief. At the end of the fourth day, however, he had a severe rigor, and in forty-eight hours he died of gangrene spreading from the stump. In such a case the gangrene was due to some very acute local pyæmic condition, and life might be spared by very early amputation high above the part affected. Mr. C. HEATH thought that Mr. Parker acted rightly in not amputating the thigh in his patient. The gangrene was the result of the original injury, not the spreading form. He thought harm was done by lowering the temperature of patients already weakened by playing the spray upon them for some long time. Recently he amputated at the hip-joint the limb of a young girl; she died in twenty-four hours, and he thought that her death was largely due to the amount of carbolic acid absorbed. Her kidneys ceased to act, and did not throw off the carbolic acid by the urine. He thought that an oily dressing to keep up the temperature of the part would have done better for Mr. Parker's patient.—Mr. PARKER said that the wound seemed to be so superficial that he was surprised that gangrene ensued. His case was not quite parallel to Mr. Page's. He most feared long septic inflammation, and that was why he used the spray and other aseptic precautions.

Mr. W. SPENCER WATSON reported a case of Tetanus. A well-nourished boy, aged eight, came under treatment eleven days after receiving a small lacerated wound on the dorsum of the foot. Four days before admission symptoms of tetanus commenced, and on admission the convulsions occurred about once every half hour. At first the temperature was 101·0°, but afterwards was very little above the normal, being 99·4°; but the pulse and respiration were much accelerated. The temperature on the second day was 100·2°, and continued at that height till the fourth day, when it went up to 103·2°. He died the same evening. He was treated by the administration of chloral, with occasional morphia injections and rather free purgation. A mustard plaster was applied to the spine. During the third day a severe spasm terminated by sudden cessation of breathing, but artificial respiration succeeded in restoring him. He died in a similar spasm ten hours afterwards. The post-mortem examination showed that the membranes of the brain and cord were intensely congested, but the substance of both appeared healthy. Microscopic sections of the cord gave chiefly negative results. The only appearances that seemed abnormal were the presence of slight vacuities in the grey matter surrounding the vessels and the multipolar cells. It was thought, however, that these spaces were due to the method of preparation of the sections. There was no exudation either in the spaces or in any part of the cord examined, except in some sections of the dorsal region, which presented colloid bodies here and there, such as those described by Dr. Ross. Sections of the peroneal nerve exhibited changes, probably due to inflammation, chiefly affecting the sheath and neuroglia. The questions raised by the case were:—1. Would the performance of neurotomy or amputation at an early stage of the case have given the patient a better chance of recovery? 2. Was the treatment by chloral and morphia the best adapted to the circumstances of the case? 3. Was the case an argument of any value as showing that the microscopic appearances of the cord are sufficient to demonstrate the essential tetanic condition? or are we justified in assuming that at present the microscope fails to give any reliable information?

Mr. HOWARD MARSH read a paper on a case of Tetanus following laceration of the toes, and lasting forty-two days; Syme's amputation; recovery. Alfred M——, aged eight, was knocked down on September 9th by a tramcar, which passed over his left foot, severely crushing the three inner toes. On September 12th he came into St. Bartholomew's Hospital with the toes gangrenous. On September 23rd tetanus set in, and in the next twenty-four hours rapidly increased in severity, and was attended by frequent and urgent spasms. Syme's amputation was performed in the afternoon of the 24th with the effect that the spasms were both less frequent and less violent. Tetanus, however, continued severe for the next thirty-five days, and then gradually subsided, to cease entirely on the forty-second day. The wound healed slowly, but without complication. It was all but closed at the end of a month after the amputation. Treatment consisted in the administration of an abundant fluid diet, the frequent use of nutritive enemata, and the employment of enemata of chloral and bromide of potassium, and of the hypodermic injection of morphia. The chloral and bromide injections did very little, if any, good. But morphia always relieved the spasms and procured rest, though only for short periods. On many days upwards of two grains were injected, as much as five-twelfths being injected at a time. The author remarked that the case was rare not only as an instance of recovery from severe traumatic tetanus, but also on account of the prolonged period (forty-two days) over which the disease extended. Though many authorities were opposed to amputation, he resorted to it in this instance because the operation was not a large one, because the foot was already in part gangrenous, and because amputation afforded the surest means of removing peripheral irritation—a principal indication in the treatment of tetanus. He did not resort to nerve division, as this might fail to check irritation, and he did not know which of the several nerves ought to be divided. In the present instance morphia was the only drug that seemed useful, and though employed in such large doses it produced no unfavourable effect.

Mr. PARKER showed a preparation of the Posterior Tibial Nerve from a case of Tetanus. The patient had a gunshot wound of one leg; the wound was thought to be superficial; for a while he got on well, but tetanus came on. Mr. Hutchinson stretched the great sciatic nerve, but the man

died. The posterior tibial nerve and vessels were found glued together with dense inflammatory matter, and four or five shots were found in the sheath of the nerve. He related another case of a pistol shot in the thigh; tetanus came on. The wound was then explored, and a wad with a portion of cloth was found buried in the soft tissues. A third case was a wound of the leg with a pitchfork; the musculo-cutaneous nerve was here found kinked and stretched; this man also died. He also referred to a fourth case of tetanus in a boy wounded just below the tubercle of the tibia where no local lesions could be found after death. He had seen two cases of tetanus neonatorum without any local lesions or bad hygienic surroundings. This form of tetanus had been known to occur epidemically in hot climates and in states of bad hygiene. He showed microscopic sections of the nerve of the first case, in which the nerve fibrils were found to be widely separated by inflammatory material.

Dr. DICKINSON remarked that there was much to favour the view of tetanus being a blood disease, as traumatic tetanus generally occurred when there was an open wound, and after a period of incubation. But no doubt the irritation was conveyed by the nerves and exerted its influence through the nervous system. He had often observed congestion of the nerves of the part, and in all cases there was hyperæmia of the spinal cord, which was the result of the nervous irritation and not the essential part of the disease. In many cases, too, there was pathological extravasation in the cord, especially on the side opposite to the wounded part. Often there were obvious lesions in the cord, amounting even to tearing in the anterior cornua. He had seen by far the best results of treatment from Calabar bean; especially in two cases—one of them traumatic and very severe. The relation of the injection of the drug and the recession of the spasm was most marked. Chloral had been the next most successful remedy in his hands. Neurotomy was generally performed too late; after the irritation had been carried up to the cord.—Mr. BARWELL related a case of a gentleman with trismus and opisthotonos, and a good deal of pain in the right leg where there was a little lump, pressing upon which caused spasm of opisthotonos and left pleurosthotonos. He cut down on the lump and removed a long piece of carpet needle, and as he did this the man had another tetanic spasm; after this he had two more slight spasms, and then got quite well. His temperature before the operation was 102°, the pulse being over 120. In this case there was no open wound. Probably the needle had perforated the nerve. It had originally entered the sole of the foot and had travelled up to the leg.—Mr. BUTLIN thought it was impossible to discuss the value of any method of treatment in all cases of tetanus while the pathology of the disease was unknown. Some cases began with local symptoms, which after a time became general; and then local operations were useful. As an instance of this, he mentioned a case of injury to the lower limb in which the part was drawn up, a weight was put on, then clonic spasms were seen at first in the limb only; and it was not till forty-eight hours later that the spasms spread to the face and other parts, and death ensued. The popliteal nerve was found surrounded by inflammatory effusion; in such a case as that local treatment—stretching or division of the nerve, or amputation—should be performed before the symptoms spread from the part first injured.—Mr. HOWARD MARSH said that Calabar bean had been often found unavailing, while chloral had been more generally useful. Cases had recovered very rapidly after amputation, even when tetanus has been well established. Until the pathology of the disease was cleared up we had nothing to do but to go on recording individual cases as they occur, with their treatment.

A case of Osteitis Deformans was shown in the ante-room by Mr. HOWARD MARSH.

MEDICAL SOCIETY OF LONDON.

Alpine Winter Health Resorts.

A MEETING of this Society was held on the 2nd inst., Sir Joseph Fayrer, President, in the chair.

Dr. SYMES THOMPSON read a paper on Alpine Winter Health Resorts. He showed first that the value of Alpine stations in winter was not limited to patients suffering from chest disease; next, that those likely to gain from mountain treatment might safely undertake the journey even in mid-winter; and that for overworked professional men needing a change a winter trip to the Engadine was as enjoyable, and often more beneficial, than a summer tour. The number of cloudless (average 64) and windless (average 112) days is the marked feature of the climate. After taking a survey of other meteorological questions, many of which are undetermined, he pointed out the classes of cases most suitable for the mountains. A patient ought to be able to keep up his circulation by active exercise, susceptibility to chilblains being a contra-indication, also a tendency to irritable throat, which the dry atmosphere often increases. In chlorosis benefit is not so marked as might be expected, and the air is too exciting for hysterical patients. Those prone to congestion and nervous headaches, rheumatism, neuralgia, and to jaundice and liver affections are apt to suffer on exposure to cold. Constipation is common, and piles troublesome; chronic skin affections do not improve as a rule. Teeth rapidly deteriorate, and it is important that before going to the Alps patients should visit their dentist. Cases of bronchitis, whether acute, subacute, or chronic, should not be sent, but limited and localised lung consolidations—the result of pneumonia or pleurisy—are among the more favourable cases, the hardened portions of lung becoming pervious and the surrounding healthy lung expanding. In bronchiectasis gradual improvement may be looked for. Spasmodic asthma is generally relieved in winter, as in summer; more so, indeed, for the weather is more steady and reliable in winter. Cases of bronchial asthma are suitable only when there is residual thickening. Cardiac cases do badly. In phthisis the grounds for selection are based less on the stage and character of the disease than on the constitutional state. The fact that the lung disease is so extensive as to lead to dyspnœa, increased at the high altitude, is no barrier; some of these cases improving greatly. If the disease is of limited area, surrounded by healthy lung, the prospect is favourable, whether signs of consolidation, of softening, or excavation exist. If the local evil is of pneumonic origin the prognosis is good, but if due to inherited tubercular disease, even though bacilli are present in the sputa, at least temporary gain may be looked for. Hæmorrhagic cases are most favourable. Hæmoptysis is not directly induced by the rarefied air, but the resulting exhilaration tempts to over-exertion. Sanguine, excitable patients need increased vigilance against incautious exertion or exposure, while those of a lymphatic temperament must be urged to overcome their disinclination for out-door exercise. A week or two may do much in cases of mental overstrain, but for chronic lung disease at least one month, and perhaps two or three months, may be needed to secure permanent arrest. During a recent visit to St. Moritz and Davos, Dr. Symes Thompson examined a large number of cases. He noticed most marked improvement in the aspect of the patients, many with advanced disease looking and acting as if well, muscular development improved, chest circumference increased, though not to a large extent. Briefly to epitomise the cases there were: four of mental overstrain, all markedly benefited; two of anæmia, one much better, the other not improved; three of cardiac disease, in one case of aortic regurgitation and one of weak heart with mitral disease, the ill effect of the climate was marked, in one of aortic regurgitation no effect noticed; of five cases of asthma all improved greatly; of the phthisical cases, six in the first stage, five improved, one not benefited; of fourteen cases in the second stage, eleven improved, two stationary, and one died; of fourteen cases in the third stage, nine improved, two stationary, and three have died. He expressed his conviction that it would be hard to find elsewhere a series of cases of arrested phthisis comparable to those seen at Davos and St. Moritz in January last.—Dr. C. T. WILLIAMS had been originally opposed to this treatment of lung disease, but had come to see its value, which had been so much insisted on by Dr. H. Weber. He would like to know the ground for Dr. Thompson's assertion that the dryness of the air at Davos and St. Moritz was greater than at Egypt. The feature of Davos is the great heat of the sun, and the intense cold in the shade and night. Caution was necessary in having windows open at night, as the temperature may fall to −2° F., and he had seen harm done by the practice. He was confirmed in his opinion that the climate increases the tendency to pyrexia. More suitable cases were sent to Davos now than formerly. Patients gained weight, appetite, vigour, and in power of resisting cold. The effect on the lungs and chest walls from hypertrophy of the healthy lung was most marked; the change is gradual, but it occurs in every case, even in the bed-

ridden, and therefore quite apart from increased muscular development. He found the journey to Davos in winter to be severe and trying, and the open sledging was a great tax for weakly patients. He advised his patients to go in October, and to move when the snow melts, halting on their way home at Thusis and Berne.—Dr. DE H. HALL mentioned that a patient suffering from pleurisy after typhoid fever had spent two winters at Davos, and had improved very much indeed. He came down too rapidly from Davos, and went to the Lakes, thereby retarding his cure. It was a great advantage to be able to get home earlier from Davos than from the Riviera. He asked for information as to the effect of such climate upon cases of fistulous empyema.—Dr. C. WISE had had experience of cold climates in Canada, and had lately spent winters in Davos. His experience was that a sleigh drive of over ten miles on a cold day was too much for delicate people, even ever so well wrapped up. Swiss trains are overheated, but those between Basle and Calais are not sufficiently heated. The ventilation at these high altitudes is imperfect, and he had found it impossible to sleep with his window open at night. The cold at St. Moritz was but little greater than at Davos. Wiesen was less intensely cold. It was well for patients to leave before the snow melts on account of the winds. Natives die from pneumonia attributable to the sudden chills and changes in mode of life. From his observations he had found the absolute amount of moisture in the air was less at high altitudes than in Egypt, and in any of these places than occasionally in Australia.—Dr. CULLIMORE said the climate was not suitable for asthma or heart affections. Only when lung disease is limited is residence at Davos good, and where hereditary tendency and hectic were absent. Nervous diseases do badly, and it is dangerous for patients with degenerate arteries. He thought that for consumptives mountain resorts were bad, and the rage for sending patients to them would soon pass away.—The PRESIDENT said too much importance had been attached to altitude; it was pure air that is of most value. For many years he resorted to altitudes of 6000 or 7000 feet, and did not experience the remarkable effects attributed to altitude. People had gone to 14,000 or 20,000 feet without suffering from such effects. The dryness of the air has the greatest effect. The winds of India are intensely dry, and also those blowing over the Red Sea. In India, hill climates are of immense benefit to many classes of patients.—Dr. SYMES THOMPSON said that the difference between day and night temperature was small. Cases of hypochondriasis and brain disease do not improve; they are troubled with sleeplessness. The electrical condition of the air is very remarkable. Asthma is very much benefited at Davos.

MEDICAL OFFICERS OF HEALTH SOCIETY.

Infectious Disease Hospitals.

AT a meeting of this Society, held at 1, Adam-street, Adelphi, on Friday, March 16th, Dr. J. W. Tripe, President, in the chair), a discussion took place on some of the "practical recommendations of the Commissioners appointed to report on hospitals for infectious diseases."—The PRESIDENT said, in opening the discussion, that he believed, from the resolutions already passed at a meeting of the Society, they were all of opinion that the provision of hospital accommodation for persons suffering from infectious diseases should be disconnected from the Poor-law administration, and he should not make any remarks concerning this recommendation. It had been inserted merely to show that, although it was proposed that the Asylums Board, somewhat modified by members elected by the vestries and district boards, should take charge of the sick, it would not be as a part of the Poor-law work. As regards the second recommendation, to the effect that the certificate of disease shall be sent to the medical officer of health, who is to satisfy himself that the patient can be isolated at home, and, if not, shall notify the case to the Metropolitan Asylums Board, who will take charge of the patient, he thought a very onerous duty was cast upon the medical officer of health. If he had personally to satisfy himself as to that fact, in a district such as that of Hackney, it would lead to so great a delay in the removal of the patient as to be very injurious to him and would also prevent other necessary work being done; besides which, it might lead to so great a conflict with medical practitioners generally as to bring matters to almost a deadlock. In the event of any legislation on the subject, the meaning of this would have to be more clearly defined. He thought that, as the Metropolitan Asylums Board, as newly constituted, would no longer be connected with the Poor-law authority, and would be bound to provide for all cases, the least complicated method of carrying out the removal of the sick would be for the Board to be required to remove all persons who were certified to them by any registered medical practitioner as suffering from an infectious disease. This would be much better than forwarding the certificate to the medical officer of health, addressed to the offices of the local authority. Of course the notice of disease would have to be forwarded to the local authority, but this duplication of work by the medical practitioner would not be of much moment. Dr. Tripe thought also that the plan would cause less friction with medical practitioners, as the person giving the certificate would be responsible for the correctness of the diagnosis, instead of placing the medical officer of health in the position of a judge on that point. It would also be necessary to have the power of the medical officer of health as to compulsory removal somewhat strictly defined, as he did not think that at present the public would be inclined to place him (the medical officer) in the position of sole judge as to the necessity for this action. As to the third proposal—that if the sick person cannot be isolated by his friends, the medical officer of health will be bound to take all necessary steps for his isolation with power to clear the house of its inmates, and to require the revaccination of all occupants who are not otherwise protected,—the President said that if this were done in a few cases, as he considered it might have to be, it would be necessary for the local sanitary authority to provide a kind of house of refuge, where those who were removed could remain until the sick person had recovered. This might be costly in those cases where the breadwinner was attacked, as the family might have to be maintained in the quarantine-house until he died or was sufficiently recovered to be removed. As to the power to require revaccination, there can be no doubt that it should be possessed by the medical officer of health.—The discussion was continued by Dr. Bristowe, Dr. Browning, Dr. Corner, Dr. Dudfield, Mr. Lovett, Dr. Rogers, and Mr. Shirley Murphy.

Reviews and Notices of Books.

Politzer's Text-book of the Diseases of the Ear and Adjacent Organs. Translated and Edited by JAMES PATTERSON CASSELLS, M.D., M.R.C.S. Eng.

Diagnosis and Treatment of Ear Diseases. By ALBERT H. BUCK, M.D., Aural Surgeon to the New York Eye and Ear Infirmary.

DR. POLITZER'S manual, which is a large volume of 800 pages, and illustrated by 257 wood engravings, contains not only all that is common knowledge as to ear diseases, and most of the recognised methods of treatment, but in it may be found the author's opinions upon nearly every kind of treatment that has been recommended in the recent numerous contributions to this branch of surgery. Dr. Cassells has done good service to English readers by furnishing them with so excellent a translation. Although the illustrations of the membrana tympani are altogether diagrammatic, they will be readily understood by those who are in the habit of constantly examining this structure. Nothing can exceed the clearness with which every change that can be seen in the membrane is described, and this accuracy would be expected by those who are familiar with the writings of Dr. Politzer. The anatomy of the ear, the physiology of the sound-conducting apparatus, are most thoroughly dealt with, as also are the methods of examination and the various operative measures that are in daily use with the workers on the subject. The three divisions which are now recognised in affections which implicate the lining membrane of the middle ear are separated by a very definite line—viz., catarrh in which the mucous secretion is in excess; catarrh in

which there is no increased secretion (the proliferous catarrh of some authors); and those cases in which the process of inflammation proceeds to the formation of pus with rupture of the membrane. On the subject of posterior nasal catarrh the dangers that may occur from the use of the nasal douche are insisted upon, but it is now probably well known to most aural surgeons that fluid used in this way to the nostrils may pass up the Eustachian tubes and excite inflammation in the tympanum. It is, however, to the chapters on the treatment of the various forms of catarrh that the reader will turn with the greatest interest. In the simple cases where secretion is in excess Dr. Politzer relies on repeated inflation with the Politzer bag, and astringent solutions applied to the pharynx. When there is abundant evidence of secretion within the tympanic cavity he says as follows: "I perform paracentesis of the membrana tympani in those cases in which, after the application for several days of the methods of treatment already described, no decrease of the exudation is observed, and in which, even when no exudation is demonstrable, the improvement in hearing, the immediate result of inflation, disappears again almost entirely in two or three days. I also frequently perform the operation in those cases in which at the first examination the accumulated exudation is seen to be copious. For although in these cases a cure may be effected by inflation alone, the treatment will frequently extend over several weeks, while by means of paracentesis a complete cure may be accomplished in a few days. The great advantage of this operation lies, therefore, in shortening the duration of treatment." The direction of the incision, whether vertical or horizontal, he regards as unimportant, but the length should be sufficient to ensure a free escape, for the air is of course passed through the middle ear to expel the secretion of mucus. With regard, therefore, to the propriety of making an opening for the escape of what seems a mucous accumulation, Dr. Politzer would appear to be in accord with the practice of many aural surgeons, but when he comes to discuss the question of operations on the tympanic membrane in cases of disease of the middle ear which are not attended with increased secretion, although a complete description is given of probably every kind of operation that has been suggested and practised, the impression that will be left on the reader is that the results are discouraging in the extreme. This will apply also to the section of the posterior fold of the membrana tympani which was suggested and practised by Dr. Politzer himself as long ago as 1871. Of this he now says, that although a temporary improvement at times took place, "only in a very small number of cases have I observed an improvement in the hearing lasting for several years, and a permanent removal or diminution of the subjective noises." Probably few have had greater opportunities than Dr. Politzer of seeing patients who have either had, or are said to have had, the tensor tympanic muscle divided, and he describes at great length the operation and varieties of the instruments that have been suggested for its performance. Then, after saying that the experience which has been gained in competent quarters is on the whole unfavourable to it, he concludes as follows:—"Division of the tensor tympani is, therefore, one of those operations which not only are of but trifling use, but which sometimes also have a deleterious influence upon the functions of hearing." Altogether the opinions which Dr. Politzer expresses on the vexed questions in treatment may be said to accord with those which met with general approval when these subjects were exhaustively discussed at the recent International Medical Congress, in the section for Diseases of the Ear.

The same observation may be said to apply to the views which are expressed in Dr. Buck's "Diagnosis and Treatment of Ear Diseases," except in so far as regards the frequency with which he practises paracentesis of the membrane. Dr. Buck inclines to the belief that, with patience and the ordinary method of treatment, the cases are rare in which it is desirable to make an opening in the membrane for the evacuation of mucus. He also very strongly advises the frequent application of a saturated solution of nitrate of silver to the posterior nares and pharynx when these parts are affected with catarrh. Indeed he has for some years given up the use of any other astringent in this direction, and has obtained excellent results. Although a brief mention is made of the practice of other well-known otologists, Dr. Buck's book is rather an account of his personal experiences than a detailed treatise on the subject of aural surgery. A great number of cases are well reported, and the author's large experiences make his book extremely interesting to those whose studies are of a similar nature. On the treatment of perforations of the membrane, Dr. Buck speaks very strongly in favour of the introduction of a weak solution of nitrate of silver into the tympanic cavity through the perforation by means of middle-ear pipettes. By these instruments (slender glass tubes, fitted with a small india-rubber ball at one end) a few drops of the fluid can be injected through the perforation. Before this is done the tympanum is carefully freed from secretion and dried, and when there appears to be much inspissated pus in the tympanum this cavity is washed out before drying. Dr. Buck regards this plan of treatment as "simply invaluable." By far the most interesting and instructive part of the book is the chapter on Diseases of the Mastoid Process, in which forty-eight cases are given where inflammation has involved more or less the mastoid bone. Several of these cases terminated fatally by cerebral abscess or meningitis, and they form a most valuable clinical record. The book will be especially attractive to those of our readers who are familiar with Dr. Buck's contributions to the Transactions of the American Otological Society.

The Principal Southern and Swiss Health Resorts, their Climate and Medical Aspect. By WM. MARCET, M.D., F.R.S. 8vo, pp. 408. London: J. & A. Churchill. 1883.

THE author informs us that he has been induced to publish this work in the hope that the experience he has acquired of the influence of southern climates on invalids, especially during three winters spent at Nice and six at Cannes, may be found useful to the profession and the public. His observations cover a wide field—perhaps too wide,—including, as they do, the South of France, Italy and Sicily, Algiers, Egypt, Madeira, Teneriffe, and the principal health resorts in Switzerland, winding up with the Engadine and the valley of the Davos. The first two chapters are devoted to advice to invalids, especially with regard to clothing and food, and to the choice of a residence and the mode of living in the principal winter quarters on the shores of the Mediterranean, and cannot fail to be useful to those who are obliged to seek a milder climate than that of England from November to April. These are followed by chapters on the natural laws of climate, the winds and weather on the Mediterranean coasts, and some observations on the benefit to be derived from a cruise in a yacht, with a fair statement also of the disagreeable accompaniments which often attend such voyages. The chapters on the climate and weather of Cannes, Nice, and the other towns of the Riviera are full of interest, and, being for the most part the result of personal observation, of thoroughly sound information. Read in connexion with a subsequent chapter on health resorts under their medical aspect, this comparison of the climates of the principal refuges for the delicate cannot fail to prove very useful to those on whom the responsible duty falls of selecting an eligible winter residence for an invalid. Dr. Marcet's account of the various resorts in the South of

Italy, in Sicily, Algiers, and Egypt, does not impress us with the same feeling of its practical value as that of the towns on the Riviera. He gives a good description of the island of Madeira, and shows clearly the class of cases likely to benefit from a residence there, and the class on which it is likely to exercise an unfavourable influence. In 1878 Dr. Marcet proceeded to Teneriffe, with a view to make some scientific experiments on the influence of altitude on respiration, and has given a most interesting account of his three weeks' bivouac on the Peak. He took advantage of the opportunity to obtain all the information he could as to the climate and its probable influence on lung disease. The result of his inquiries was a belief that Teneriffe "will eventually become a favourite station for consumptive invalids," especially if an improvement take place in the hotel accommodation and in the cooking and attendance, which at present are too decidedly Spanish. In the chapter on Health Resorts under their Medical Aspects, Dr. Marcet gives a brief sketch of the advantages likely to be gained from a residence at the different classes of these places, and of the diseases to which they are specially applicable, which well deserves to be studied. His account of the principal invalid stations in the mountains of Switzerland, which follows, is pleasant reading, but rather too sketchy; and that of the Engadine and Davos Valleys is not likely to supersede the excellent description of them by Dr. Burney Yeo. The book, however, as a whole is very good, and we can recommend it strongly to the study of all who are interested in the question of the influence of climate upon consumption and other constitutional diseases.

New Inventions.

THE "CRANE-AGRAFE."

THE accompanying engraving shows a new instrument for holding the skull while sawing off the calvaria. This apparatus is called a "Crâne-agrafe" or "Skull-grip," and has been suggested by J. D. McCaw, F.R.C.S. Ed., &c., of Portglenone, Belfast. It consists of two narrow blades, which are concave so as to encircle the skull, and attached to a handle which projects from the top of the head. By means of a double screw action joint the blades are opened and closed at pleasure simply by turning the handle; and when placed in position on any skull, large or small, the instrument can be fastened so tightly by the simple turn of the handle as effectually to prevent any movement of the head during the sawing process; and the length of the blades—in which points are placed at either side and at the back and front to avoid slipping—serve as a guide all around the skull, thus ensuring a straightly sawn line. The instrument is made by Messrs. Mayer and Meltzer, of Great Portland-street, W.

A NEW INSTRUMENT FOR SUPRA-PUBIC PUNCTURE OF THE BLADDER.

THIS instrument, suggested by Dr. T. Frederick Pearse, consists of a trocar and cannula, made of a size and shape suitable for tapping the bladder above the pubes, and of a specially constructed silver catheter to fit in the cannula. The cannula is provided with rings, so that it can be tied in position like a tracheotomy tube. The catheter is made to accurately fit the cannula, its point extending about an inch beyond the point of the cannula into the bladder. The external portion of the catheter is bent at a right angle for

the purpose of fitting on a piece of india-rubber tubing, and is provided with a shoulder to prevent it slipping down the cannula into the bladder. The object of the instrument is to prevent the patient's clothes and bedding from being soiled, as occurs under ordinary circumstances from the almost constant discharge of urine through the artificial opening, by providing a sort of artificial urethra which can be opened or closed when desired. By its means the patient is enabled to get up and move about soon after the operation without fear of soiling his linen. The instrument is made by Messrs. Arnold and Sons, of London.

TWO NEW STETHOSCOPES.

1.—A PORTABLE BINAURAL STETHOSCOPE.

HARDLY a month passes without some new device being planned in the matter of stethoscopes; and the various modifications introduced into the original plan are far more numerous than were sketched by Dr. Wilks in his recent paper on the "Evolution of the Stethoscope," published in this journal. One further step in this "evolution" has been made by Messrs. Salt and Sons, of Birmingham, who, in order to meet the objection to the binaural instrument arising from its cumbersome form and want of portability, have adapted to its construction the plan of sliding-tubes, which, it may be remembered, they recently applied to the single-stem stethoscope. In this latest invention the chest-piece in no respect differs from those in general use, but the upper metallic parts are made to slide by a threefold telescopic action, and when closed up are only five inches and a half in length. So far as we have tested the instrument, there is nothing lost by this device in its acoustic properties, and it remains to be seen whether it will be as durable as those binaural stethoscopes in which the metal tubes are constructed in one piece. The instrument is a very elegant one, the metal parts being made of aluminium-bronze, and the mounts of celluloid.

2.—A FLEXIBLE STEM STETHOSCOPE.

We have also received a stethoscope invented by Mr. MacMunn, to facilitate examination where the rigid instrument is difficult of application. It is longer than the ordinary stethoscope, and the tube is composed of soft metal, which can be bent without injury, and yet is sufficiently strong to bear the pressure of the ear. Although acknowledging the ingenuity of the device, we must candidly confess, after a practical trial, that the conducting power of the stethoscope is decidedly impaired when it is bent, unless the bending be only at a very obtuse angle. This no doubt in part arises from the necessity of supporting the instrument with the fingers when it is so bent, but not wholly. The stethoscope has been constructed for Mr. MacMunn by Mr. Pratt, of Oxford-street.

THE LANCET.

LONDON: SATURDAY, APRIL 7, 1883.

THE Council of the Royal College of Surgeons of England has expressed an opinion on the clauses of the Medical Bill. This opinion is embodied in the "Statement" which we publish in another column. That the College of Surgeons, as one of the bodies likely to be most materially affected by the proposed changes, would not welcome the Bill with open arms, might have been anticipated, but it was reasonable to expect that if it did offer any serious opposition, it would, in what it might have to say, pay some respect to the reasoned recommendations of the Royal Commissioners and to the mature opinion of many enlightened and unprejudiced persons within as well as without the ranks of the profession. We have, instead, a diffuse, irrelevant, and, except from the College stand-point, incomprehensible statement. It is difficult to understand how anyone familiar with all the turns and phases of medical education and politics, as we assume the President of the Royal College of Surgeons to be, could seriously employ the arguments making up the body of the "Statement"; but it almost passes conception that these arguments should have been adopted as adequate to the occasion by a majority of the whole Council. It must be borne in mind that the Medical Bill is framed on the recommendation of the Royal Commissioners appointed to inquire into the Medical Acts. The evidence collected by the Commission showed not only that the diplomas and degrees of all existing Licensing Bodies "imply very different standards of skill and knowledge, but that in some cases the possession of a diploma affords no guarantee that the practitioner holding it possesses a competent knowledge of medicine, surgery, and midwifery." It was further mentioned as a notorious fact, that "even the diploma of the Royal College of Surgeons of England does not imply a knowledge of midwifery." The Medical Bill seeks to remedy these and other evils. "There is," the Commissioners reported, "no point of medical reform on which there is so general an agreement as that the holding of a medical licence ought to imply the possession of a complete qualification for practice—that is to say, the attainment of a sufficient standard of proficiency in all the three essential branches of medical practice — medicine, surgery, and midwifery." To attain this end the Medical Bill seeks to compel every one before being registered as a medical practitioner to prove his competency in medicine, surgery, and midwifery, by passing the final examination of an independent Medical Board constituted under the Bill. The practical effect of this final examination would necessarily be to abolish as "registrable" titles the lowest qualifications of most of the existing corporations. Only in this way could the wide diversity of the existing minimum qualifications be remedied, and the proficiency of the medical practitioner ensured.

Against all these proposals the Royal College of Surgeons "energetically protests." It is amusing to watch the process by which the College seeks to retain its rights and privileges and to impede the course of legislation. The method is more ingenious than novel. Starting with a declaration of "honourable intentions," the Council of the College announces that it has long been prepared to take part in a Conjoint Scheme for the purpose of securing a complete qualification; and then it proceeds to express a qualified approval of the Medical Bill as a prelude to vigorous opposition. Some of the provisions, we are told, "appear to be well adapted to bring about a consolidation of the present examining authorities in each division of the kingdom"; but, on the other hand, there are provisions which are open to "grave objections," because, among other reasons, "they would surely tend to diminish the influence of existing institutions." The Council seems supremely unconscious of, or rather indifferent to, the fact that the intention of the Royal Commissioners and of the framers of the Bill is that the influence of many of the existing institutions should be diminished.

We cannot pretend to thread the maze of argument and assertion contained in the "Statement." The Medical Bill obviously pinches the College of Surgeons in the precise spot at which the Apothecaries' Company and some other Corporations will feel the pressure most. The "intention and effects" of the proposals of the Bill "at which the Council cannot help expressing both surprise and regret, would seem to be to exclude from the Register in future the title of M.R.C.S.E. as it is now granted, as well as other similar 'lowest' qualifications." This is surely solemn trifling or the most astonishing *naïveté*. The Royal Commission made a distinct charge against the diploma of the College of Surgeons, that it did not "imply a knowledge of midwifery," and yet the Council of the College affects "surprise and regret" at the prospect that this and other "lowest" qualifications will, after the passing of the Medical Bill, cease to be registrable. The answer to this objection is simple. The Bill provides for the registration of "higher titles," by which is meant "any title indicating or implying the grant of a diploma which may appear to the Medical Council to have been granted after examination in respect of a substantially higher degree of knowledge than is required to obtain a qualifying diploma under this Act, or a diploma which has been granted as a testimonial of special distinction, and appears to the Medical Council to deserve recognition as a higher medical diploma." If the diploma of Member of the Royal College of Surgeons imply "a substantially higher degree of knowledge" in surgery, it will be registrable as a "higher title"; but if it should not imply a higher degree of knowledge, we fail to appreciate the necessity of its existence either as an ornament or as a stimulus to medical education. The Council of the College of Surgeons, which contains many past and present teachers of anatomy and surgery, cannot be really so devoid of public spirit or political sagacity as to ask that the evils of nineteen licensing bodies shall be perpetuated in order to give a false and artificial value to its diploma of Member. This diploma, like others, must acquire a reputation and value for itself in the conflict of competition. We are, however, far from believing that the College of Surgeons, under the operation of the Medical Bill, will be in the predicament indicated in the extraordinary "Statement." The truth is the Council seems

to have become panic-stricken, and having among its nominal chiefs no clear head to counsel and guide it, blunders heedlessly along from one expedient to another in order to save the privileges that in its disordered imagination it believes to be threatened. The result appears first in the recent combination with the Royal College of Physicians, and now in the rambling and discursive "Statement" which has to pass for reason and argument. Had more enlightened leaders been forthcoming, we are convinced that the Council of the College of Surgeons might easily have been steered from out the shoals and quicksands of selfishness and vested interests to the open sea of permanence and prosperity. Not only would it then have gained the confidence of all zealous reformers, but it would have secured for itself a predominant influence in future deliberations for the solution of the intricate problems of medical education and examination.

THE current number of the *Contemporary Review* contains an article on the Anti-Vivisectionist Agitation, by Dr. E. DE CYON, and a reply by Mr. R. H. HUTTON. We must confess to being at a loss to understand the exact object aimed at by thus again introducing this subject in such a place, and having read the articles, we fail to see that either of them advances the discussion in any particular. It is but fair to remember that Dr. DE CYON is writing chiefly, if not entirely, in fulfilment of a pledge, that he is writing not in his native tongue, and with confessedly an imperfect knowledge of the details of the "agitation" in this country. Dr. DE CYON is quite as much annoyed with the conduct of the profession in this country in this matter as he is with that of his opponents. He considers that the profession has made a grave error in carrying on "a scientific discussion with the persons whom interest or eccentricity has led to declare against the laboratories," with "outsiders whose judgment has no value at all in matters of science." Such a line of conduct he regards as excessive condescension, and as certain to be unsuccessful, and he would have preferred to see agitation met by agitation, petition by counter-petition, and every weapon turned against the enemies of science which had been so skilfully and unscrupulously used against themselves. We do not agree with Dr. DE CYON, but we thank him for his statement, as it has been the cause of eliciting from Mr. HUTTON a sweeping condemnation of the policy and action of many his "anti-vivisection" allies. These are Mr. HUTTON'S words: "No reasonable person ever fancied for a moment that any one but a physiologist is competent to criticise the physiological ends which the physiologists propose to themselves in vivisection." We are glad to have such high authority for considering many of the opponents of vivisection mere unreasonable agitators. Dr. DE CYON gives several examples of the wholly dishonest use made by the "anti-vivisectionists" of this country of diagrams and garbled sentences from his "Physiologische Methodik." In this there is nothing new, but the facts stated are so disgraceful, that we are astonished that any body of men and women professing to be moved by more than ordinarily high and pure motives should resort to such contemptible and dishonest means of prejudicing their opponents and of furthering the adoption of their views among the unthinking and the ignorant. Mr. HUTTON is silent in regard to this, and writes as if this meanness were consistent with a "sheer sense of justice and humanity" by which alone he is influenced in this matter. After defending himself from the charge of cruelty, Dr. DE CYON criticises with some severity his assailants, and shows that of the two leaders of the movement against vivisection in Germany, one was ignorant of the matter, and the other, well-informed, was actually insane at the time he wrote against physiological experiments. Mr. HUTTON'S article deals exclusively with Dr. DE CYON'S, and he has somewhat closely followed the latter in all those features which he indicates as errors. Attaching blame for imputing motives to the leaders of the "anti-vivisection" agitation, he does the same himself not only by assuring his readers that his associates "have joined in the movement from a sheer sense of justice and humanity, and for no other motive whatever," but by repeating the odious charge against Dr. KLEIN that his correction of his first evidence before the Royal Commission was untrue, and that his later statements did not represent the true state of his mind. Mr. HUTTON'S argument is summed up in one sentence: "What we do maintain, however, is this — that there is a much higher moral object in prohibiting torture, *even for the discovery of new truth*, than any which you can plead for experiments involving torture; and of the relative importance of cherishing humane habits and promoting scientific discovery the general public are just as good judges as" Dr. DE CYON. What Mr. HUTTON may mean by "torture" we cannot pretend to know, for it is used in the most various senses; but if we take it as denoting severe and prolonged suffering, it is at once evident that Mr. HUTTON'S "moral object" is not attained by prohibiting the larger number of physiological and pathological experiments. His words surely mean, in reference to any vivisection, "no pain, no immorality." He is scarcely, therefore, in a position to support the existing law, much less to advocate a more stringent measure for the complete suppression of all vivisection. But of course we cannot accept Mr. HUTTON'S view even in this sense, for we believe that the "moral object" in pursuing investigations for the discovery of truth which shall be of advantage to all succeeding generations of men or animals, or both, and the means of prolonging or saving life and mitigating suffering, is far greater than any which can arise from the protection of a few individuals from pain, in most cases very slight, and in but rare instances severe. Such a view is in harmony, we believe, with the truest philosophy and the workings of nature, and is a principle of almost universal application. But after being told by Mr. HUTTON that no "reasonable" layman is competent to criticise the physiological ends which physiologists propose to themselves in vivisection, it is surprising to find him stating that the general public are as able as the profession to judge of the importance of promoting scientific discovery. Can Mr. HUTTON give one single instance in which the public have shown as correct an appreciation of the value of scientific discovery as the labourers in science themselves? And to be ignorant of the value of a discovery carries with it ignorance of the value of promoting such a discovery. Nor is the other part of the comparison Mr. HUTTON would draw more valid. We very much doubt whether the general public know much about the value

of humane habits. Certainly inhumanity stalks through this and every other land, and the true meaning of humanity is understood by few and practised probably by fewer still.

THE subject of sudden death and fatal coma in diabetes is one so intimately bound up with the nature of the disease itself that it is surprising that attention should have been paid to it only in recent years; for of all modes of termination this is perhaps the most frequent, and the explanations put forward for its occurrence have none of them been found of general application. In a valuable paper contributed to the last volume of Guy's Hospital Reports, Dr. FREDK. TAYLOR reviews the subject in the light of the experience of that hospital, and deals with twenty-nine cases of diabetic coma out of a total of forty-three fatal ones. Fourteen of these twenty-nine cases were uncomplicated; and of the remainder, three were combined with old phthisis, seven with recent phthisis or pneumonia, one with ulceration of the bowels, two with pyelitis and suppurating kidneys, and one with carbuncle and granular kidneys.

The same subject is dealt with by Professor FRERICHS, of Berlin, in the current number of the *Zeitschrift für Klinische Medicin*, and its appearance is a timely one for physicians in London, who are now engaged in discussing the morbid anatomy and pathology of diabetes at the Pathological Society. The writer speaks from a large experience of the disease, no fewer than four hundred cases having passed under his hands; but he refrains from any statistical conclusions as to the frequency of death by coma and collapse, as many patients passed away from notice, or died at a distance from causes of which he has no accurate record. He is, however, possessed of a sufficiently large record to show that a rapidly fatal termination is more frequent in this disease than is generally accepted, and to justify the remark that the diabetic lives in constant jeopardy. The fatal result may occur through syncope from cardiac paralysis, from collapse, with more or less general functional nervous disturbance, insensibility, delirium, somnolence, and coma, often, but not always, accompanied with a sense of anxiety and by severe dyspnœa. Sometimes no exciting cause can be discovered for this event. In other cases, excessive physical exertion, mental emotion, or anxiety determine it; and more often still it is preceded by some local disease, such as gastric catarrh, constipation, tonsillitis, alveolar abscess, &c., or the more formidable onset of bronchitis and pneumonia. Whether they be only of the nature of epi-phenomena or not, the urgent symptoms (which occasionally pass away for a time) may be arranged into three distinct groups, each of which Professor FRERICHS illustrates by examples. In the first group he places those cases where the diabetic, generally after some exertion, is attacked suddenly with general weakness, cold extremities, feeble pulse, somnolence, and loss of consciousness, death ensuing in a few hours. In the second group the symptoms are more prolonged, and are usually preceded by symptoms or such local affections as are above mentioned. Then occur headache, restlessness, delirium, great anxiety, sometimes a maniacal state, dyspnœa with or without cyanosis, a weak and rapid pulse, low temperature, somnolence, and coma. The breath in these cases has often the odour of chloroform or acetone very marked. Exceptionally the drowsiness passes away, to recur later, or to be followed by more lasting improvement. The whole cycle of events may be run through in twenty-four hours, but the condition generally lasts from three to five days, sometimes longer. In the third group of cases there is no dyspnœa, and the strength seems fully maintained, when the patient is attacked with headache, giddiness, and drowsiness passing into coma; the breath here also has the characteristic odour, and the urine yields the burgundy-red tint when tested with perchloride of iron. Any or all of these events may be associated with the inflammatory local affections met with in diabetes—as erysipelas, pneumonia, meningitis, &c. Professor FRERICHS makes a few remarks upon the diagnosis, prognosis, and treatment of the condition, and shows how futile have been all attempts to save life on the several plans proposed; and he passes on to discuss its cause and nature. These have been sought (1) in changes in the nerve centres, and the most various lesions have been described—as hyperæmia, œdema, hæmorrhage, &c.; but none of these are constant, and are all probably explicable as results rather than causes of the initial disturbance. Nor is there any solid evidence in support of the view that the symptoms are due (2) to an inspissation or other alteration of the blood; microscopical and spectroscopical examinations show no evidence of such change. Again, the symptoms have been attributed (3) to uræmia, and there is a certain similarity in the symptoms due to this cause and to diabetic coma. Moreover, in some cases the urine is much diminished or suppressed, or albumen may appear in it; but this is by no means invariable, and the symptoms are not the same as those of uræmia, which does carry off a certain number of diabetics who have organic renal disease. Of late years much attention has been directed to another process—(4) fat embolism,—to the occurrence of which the cases related by Dr. SANDERS and Professor HAMILTON afforded such strong support. FRERICHS remarks that fat embolism has not been observed in the brain, although met with in many other organs; and he has never detected it himself, although he has carefully sought for it. In only one case was the blood at all milky, and in that case no embola were found. Moreover, examination of the blood during life does not reveal an excess of fat. Then comes the question (5) of acetonæmia, which, since the discovery of acetone in the urine in diabetic coma by PELTERS, in 1857, has been regarded as the cause of this condition. Much remains to be ascertained concerning the occurrence of acetone and the products that precede its appearance; but this much is known, that acetone injected into the blood of animals does not produce symptoms of coma; and FRERICHS thinks that the term "acetonæmia" should be discarded. The characteristic reaction with perchloride of iron is due to the presence of acetic ether, but the same reaction is given by aceto-acetic acid, and neither of these substances produces the characteristic symptoms of diabetic coma in animals. Lastly, the symptoms have been referred (6) to defective elimination, based on the fact that more or less extensive necrotic changes occur in the renal and other epithelia in diabetes, as well as a hyaline degeneration of the tubes of Henle in the kidney. But, as is shown in an appendix to this paper, these renal changes are due to the deposition of glycogen in the affected tissues; and they

occur in all cases of diabetes, whether death be ushered in by coma or not.

The conclusion at which Professor FRERICHS arrives is not, then, very satisfactory, but it shows how much yet requires investigation. There are probably various causes in operation, and the first group of cases differs markedly from the others. In it death takes place from cardiac failure; there are no nervous symptoms, and the characteristic odour of the breath and reaction of the urine are absent. It is due to cardiac degeneration, owing to rapid tissue-waste, and other unknown factors which may operate in preventing tissue regeneration. The symptoms of the second and third groups are those of intoxication. A series of changes take place in the blood, the final products of which—aceto-acetic acid and acetone—are known, but the initial products of such fermentation in the blood itself are unknown and difficult to ascertain, from the rapidity with which the process takes place. The value of the paper is enhanced by two elaborate appendices, one by Dr. EHRLICH, demonstrating by means of iodine the invariable presence of glycogen in the renal cells at the junction of the medulla and cortex of the kidney in diabetes, the presence of the same substance in other tissues and in inflammatory exudations being as constant as in the non-diabetic organism; and the other by Dr. BRIEGER upon chemical researches with respect to diabetic coma, particularly as to acetone and its allies.

SCOTLAND has much reason to be satisfied with the Medical Bill. The essential bodies in Scotland, whether as regards medical education or examination, are the Universities, especially the Universities of Edinburgh, of Glasgow, and of Aberdeen. If the Bill of the Government become law, these Universities will have the control in a great measure of the character of the licensing examinations in Scotland, and, if they use their power well, may be expected to extricate the lower qualifications of Scotland from that discredit which has fallen upon them of late years. The Corporations of Scotland stood charged before the Royal Commission with having examinations of accommodation. They made things easy. The student who found that he could not pass in London repaired with hope and confidence to one, or rather to two—for the Scotch bodies learned long since the art of combination—of the Scotch Corporations, and returned a fully fledged surgeon and physician. It was not only the witnesses before the Royal Commission who gave evidence to this effect. The evidence last year of the Visitors of the Medical Council was to the same purport. These gentlemen, in their exquisitely euphemistic reports, testify to the same effect. In their report on the double qualification examination of the Royal Colleges of Physicians and Surgeons of Edinburgh, they say "this is known to be the examination which, above all others, attracts weak candidates from English and Irish schools." Speaking of the primary part of the examination, the Visitors say "they feel bound to notice certain respects in which the examination appeared to fall short of the requirements considered necessary by other examining boards that they have inspected." It is serious to find the fundamental subject of anatomy to be one in which the Visitors found the examination defective. "Indeed the major part of the anatomical examination consisted of questions which, in the opinion of the Visitors, were of too elementary a character for an examination for this qualification." The legislation of 1858 has been too much for the impecunious Colleges. Mr. SYME, so long ago as 1870, said in our columns that the College of Physicians, by the sale of its licences to English apothecaries "at the moderate charge of ten guineas a piece, *without any examination*, in one year replenished its coffers to the amount of no less than £10,000." (THE LANCET, Jan. 8th, 1870.) Up till recently all the Scottish Corporations virtually sold their Fellowships, and even now, notwithstanding the exposure of this bogus system, in Parliament and elsewhere, as far as we know, it is continued by the College of Surgeons and the Faculty of Glasgow. So much for the Corporations of Scotland. It would not have been an excessive punishment if the Government had proposed altogether to disfranchise bodies which have considered their own coffers rather than the interests of medical education and practice. In the Bill now under discussion the Government has wisely given a largely predominating influence to the Universities of Scotland. The Divisional Board will consist of eleven members, of whom eight will be chosen by the Universities and three by the Corporations. This is a severe rebuke to the Corporations, but not more severe than is called for; and any Scotch member who ventures to condemn such a rebuke will gain few thanks from Scotch graduates, who, like Mr. SYME, have watched the action of the Scotch Corporations since their diplomas became legal qualifications. The rebuke administered to the Scotch Corporations is fully compensated for, in the eyes of all good Scotchmen and Scotch graduates, by the honour done to the Universities of Scotland for their great devotion to the cultivation of medicine. It will be a new function of the Universities, a veritable extension of University influence, to control the minimum examinations of the country by their overpowering influence in the Divisional Boards. We cannot but perceive in the constitution of the Divisional Board for Scotland a well-deserved tribute to the northern university system, which ought to command for the Bill the support of all who wish to maintain and increase the fame of the country of CULLEN and the HUNTERS, of ALISON, CHRISTISON, and SYME.

THERE is nothing that calls for special remark in the MONASTERIO case. It is simply an instance of misadventure, possibly of intentional wrong-doing, though upon that issue we cannot offer any opinion, in the working of a system which, except to those who are officially committed to its approval or support, seems to be specially devised with a view to facilitate the occurrence of grave misadventures and the doing of great wrongs. The Lunacy laws of France may be worse in their minor details, or they may be either more carelessly or less conscientiously administered than our own, but the same radical defect is common to both. Any medical man, with or without a special knowledge of mental disease, is empowered to sign a certificate of lunacy, which is, in fact, a *lettre de cachet*, or warrant for the arrest and imprisonment of the person named therein. Nor is the committal made to a prison—or asylum—provided by the State, and under official management. The place of confinement is, in fact, a private establishment, on a footing, in that respect, with the old sponging-houses to which debtors were once hurried. The proprietors of private asylums for the insane very strongly

object to the licensed houses under their control being described as "prisons," or in any way compared thereto. We do not employ the term, or suggest the comparison, in a spirit of carping or hostile criticism, but it should once for all be understood, and continually borne in mind by our readers of all classes, that we are wholly opposed to the private-asylum system as at present existing, and that we earnestly desire to see it reformed, not, indeed, by the abolishment of *private* asylums for the insane, but by placing those institutions on a satisfactory footing as regards the interests which proprietors or lessees have in the reception and retention of patients. We contend that the State should take over the private asylums as it has taken over the telegraphs, or at least empower municipalities and county boards to acquire and manage such property. The moral of the MONASTERIO case does not, however, so much relate to the private-asylum system as to that of "certifying." Here lies the great fault of the mode of procedure both in France and in England. No non-official person, whether medical or clerical or legal, ought to have the power of making what is practically a secret order for the removal of an alleged lunatic to an asylum. Certificates should in no case be given by private individuals engaged in practice for fee. It is a mistake to suppose that the endorsement of certificates thus given by a magistrate would afford the smallest security. In a case of lunacy, which is so self-evident that a magistrate can himself recognise the existence of mind disease, his endorsement of the certificate must be unnecessary. If, on the other hand, the insanity is not, so to say, *overt*, no layman—we will go farther and say no one but a man who has specially studied mental disease—can possibly form a judgment of any real value. In short, the magistrate is no more use in the matter of lunacy than he would be in a doubtful case of fever or obscure disease of any description, simply because he cannot make a special medical diagnosis. As to the supposed safeguard afforded by the mere countersigning of a certificate that may be dismissed as worthless. Unless the person countersigning can form a judgment of the actual needs of the case, he must be guided by his opinion of the practitioner, and neither the public nor the profession would consent to the exercise of magisterial functions on such a basis. Until certificates are given by official medical men not engaged in private practice, and properly qualified for the task of examining the insane, cases like that which has just attracted attention in France must occasionally occur. We have said that we cannot form any opinion as to the *bona fides* of the medical men concerned in the case of Mdlle. MONASTERIO. There is simply nothing to guide us. We have too often, unhappily, in England, to condemn hasty examinations. All we can say is that precisely what has happened in this *cause célèbre* may happen again under similar circumstances, and without the smallest intentional wrong-doing on the part of the medical men concerned. It is the system that is bad—rotten to the core, but not yet rotten enough, it would seem, to secure a legislative remedy.

DR. J. H. BALFOUR, lately Professor of Botany in the Edinburgh University, has intimated his resignation of the office of assessor in the University Court for the General Council, on account of ill-health.

Annotations.

"Ne quid nimis."

THE ENGLISH COLLEGE OF SURGEONS AND THE MEDICAL BILL.

AT an extraordinary meeting of the Council of this College, held on Wednesday last, it was resolved to present a Petition to the House of Lords against the Medical Bill, and further to issue a Notice to all the Fellows and Members of the College, calling attention to the probable effect of some of the clauses of the Medical Bill upon the position of the College. As both the Petition and the Notice are calculated to mislead those who may not have had the opportunity of becoming intimately acquainted with the Report of the Royal Commissioners and with the clauses of the Medical Bill, we wish to utter a word of caution against the sophistries of the arguments used by the Council. This is all the more necessary as the opposition of the College is purely an *argumentum ad Collegiam*. The College objects to the Bill because it is likely to accomplish the ends which the Royal Commissioners set forth as desirable, and which the framers of the Bill have steadily kept in view—namely, first, to allow no one to be registered as a medical practitioner unless he have proved his proficiency in medicine, surgery, and midwifery before an independent medical board; and, second, to get rid of the great inequality of the "lowest" qualifying examination incident on the competition of nineteen Licensing Bodies. The Petition to the House of Lords mainly relies on the circumstance that under charters the College has since 1800 granted the diploma of Member, which, under the Medical Act of 1858, entitles its holder to be placed on the Medical Register, and to enjoy all the rights and privileges of registered surgeons. But it does *not* state that for sixty-seven years this diploma was granted without any examination in medicine, and for eighty-one years without any examination in the practical or theoretical knowledge of midwifery. The petition further alleges that the Medical Bill proposes in future to deprive members of the College of their rights and privileges as registered practitioners. This assertion savours alike of the *suppressio veri* and the *suggestio falsi*. The Bill will leave the rights and privileges of Members of the College as registered practitioners entirely untouched. The effect upon the diploma of Member of the College of Surgeons will be that in order to be registrable this diploma will have to imply a "substantially higher degree of knowledge" than that required in the examination under the new Act. If it cannot establish this claim to superiority it will be superseded as no longer necessary, though even after the passing of the Bill the College will be as free as ever to bestow its diploma of Member on whomsoever may be willing to pay for it. In the Notice to the Fellows and Members of the College the cloven hoof unmistakably appears. The Members are told that in future they will be placed in a disadvantageous position, and discredited by the new title of "Licentiate of the Medical Council." After this appeal to "prejudice and passion," the members are asked to "exercise all the influence they possess, whether by petition to Parliament or otherwise," to prevent the Medical Bill from becoming law in the present form. We have faith in the Fellows and Members. They will not allow a sentimental and chimerical attachment to the College to stop the course of a beneficent reform designed as much in their own private and professional interests as for the public good. Besides, if the Council of the College had that amount of regard for the opinions of the Fellows and Members that it now professes, it would have pursued the politic and honourable course of inviting them to a general conference within the walls of the College. From this the Council has wilfully and deliberately abstained.

THE FRENCH SANITARIANS IN LONDON.

THE Technical Commission of the Paris Municipal Council, whose arrival we announced last week, have now completed their labours. The first day, under the able and kind guidance of Colonel Frank Bolton, was devoted to filtering beds, pumping stations, intake, &c., of the Chelsea and Southwark Water Companies. This comprised a very pleasant country drive and a lunch on board a steam-launch while going up the Thames; but, in spite of rapid travelling, and the devotion of a whole day to this subject, our foreign visitors only saw the water-supply of one-third of the metropolis. On Tuesday, after visiting St. Thomas's Hospital and the Peabody Buildings in Old Pye-street, the Commission proceeded to Claremont, where Mr. Griffith, engineer, explained the elaborate drainage of the Royal mansion. This was new to many of the Commission, who were surprised at the extreme care taken to ventilate the drain-pipes and break off all connexion between the house and the sewer—works which altogether cost £2200. The necessity of such precautions became very evident, however, when, later in the day, a descent was made into a small sewer near Smithfield. In spite of numerous ventilators, the sufficient fall, and the rapid course of a large water-supply, the stench was almost unbearable. Further experience acquired on the Wednesday at the Crossness outfall and in the sewers at Deptford, went to prove that the sewers all generated obnoxious sewer gases, and it was also remarked that this gas had a different odour to what may be noticed in the Paris sewers. The latter, as is well known, do not receive the drainage from the closets, and, though their smell is often even more pungent, it is not of the same character. It may, therefore, be concluded that the experience acquired in London will tend to the adoption, in Paris, of a separate canalisation for the conveyance of sewage proper. The system of hardware pipe sewers was examined at Clapham Junction, where a new street of houses is being constructed by Mr. J. Rowe. Some members of the Commission went to the Parkes Museum, some to King's College Hospital, and several other places of interest were visited. Altogether, an enormous amount of work was crowded into a very limited period of time. The magnificent machinery at the various pumping stations, for both the water-supply and the raising of sewage, was especially admired, and something has been achieved towards demonstrating the immensity of these works of public salubrity. After all that has been said against the unwholesome condition of Paris, and strengthened by this example of the bold efforts made in London, it is to be hoped that our neighbours will no longer hesitate, but commence at once to cope with the difficulties that beset them.

"MAN'S DUTY TO MAN IS GREATER THAN HIS DUTY TO BEASTS."

DR. PLAYFAIR is the author of this epigram, and it concisely embodies and expresses the truth about vivisection. It is, in fact, the law of nature, and of nature's God. When fallen man—according to the story of "Genesis"—resorted to the vegetable kingdom for his clothing, the Creator pointed him to the animal kingdom as the source of supply. The garment of fig leaves was divinely replaced by a clothing made of the skins of beasts. This was a clear intimation that not simply for food, but for other necessaries, man was to regard the animal creation as under his control and at his command. It was wise of Dr. Playfair to take up this strictly accurate position indicated by the passage from his speech with which we have headed these remarks in dealing with the anti-vivisection movement. Mr. Reid's Bill was "talked out" on Wednesday. It could not have met with a more appropriate fate. We have not a word to say against the motives of those who promoted this measure. In so far as they were prompted by feelings of humanity, they are, of course, admirable. Our position with regard to vivisection is clearly defined. We denounce all *cruelty*, properly so-called. We would not inflict a single pain on the lower animals needlessly. We think experiments should *never* be employed to demonstrate what has been scientifically ascertained and affirmed; and we are of opinion that anæsthetics should always be used when their employment does not altogether destroy the value of the inquiry. We yield to none in our regard for animal life, and in our abhorrence of "cruelty"; but it must be conceded that certain investigations falling under the description of "vivisection" are *necessary*. Further repressive measures, such as Mr. Reid and those he represents would place on the Statute Book, could not possibly prevent the experiments he seeks to interdict. They would simply be performed out of England, at great inconvenience and under conditions not so satisfactory to the humane conscience as those which the law, as it now stands, sanctions and enforces.

A TWENTIETH MEDICAL AUTHORITY.

THE nineteen medical bodies dispensing fifty or sixty different degrees and diplomas of very unequal value have been supplemented by a twentieth. The Victoria University has just received its Supplemental Royal Charter, giving it power to grant and confer to and on all persons, whether male or female, who shall have pursued a regular course of study in a college in the University, and shall submit themselves for examination, such degrees and certificates of proficiency in medicine or surgery as the University shall from time to time determine. The addition of another body to the already too long list is only another argument for such a change in the law as will consolidate the licensing authority and create a strong Medical Council. What would lawyers think of twenty iuns of court to grant qualifications to solicitors? We have every hope that the University of Manchester will do good work that will compare favourably with that of older bodies, but, in order to do this, we trust the new University will remember its function is not a licensing one, but one much higher—that of rewarding by honourable degrees men who have carried their studies to a higher point than that requisite for merely getting on the Register, remembering the words of the late Professor Syme, "As to the Universities, it has been long and vehemently maintained that licensing for general practice is quite unworthy of their position in the scientific world, and there can be no doubt that if relieved from it they could confer degrees of a much higher academic character."

ST. ANDREWS UNIVERSITY.

HIGH hope at present inspires the hitherto ill-paid principal and professors of this ancient seat of learning, and at the meeting of the general Council, held last week, the report of the committee on legislative action was deemed most promising. St. Andrews has all along taken the keenest interest in the pressing question now to be dealt with by the Government by the appointment of an Executive Commission; and indeed its liberal treatment of this university is a matter of life and death to the languishing school, so pleasantly situated for earnest study. The decreasing power of attraction for students exerted by St. Andrews requires a galvanic treatment which the professors think can be best applied through the exchequer. Their chief cry is for cash, but many non-clerical friends would with equal confidence welcome the most liberal rearrangement of the curriculum, as more likely to set in motion the potentialities now existing in the way of endowments. The heads of the

university would probably raise a wonderful hubbub if the Commission recommended the extinction of the Divinity Faculty in this and at least one other of the Scottish universities; but those whose wish is chiefly centred in the higher study and better teaching of theology might say that the miserable classes, consisting each of about half a dozen students, should be amalgamated, and that the same process should be adopted towards the salaries of the professors. The existence of four complete sets of machinery for the training of ministers of the Church of Scotland is a farce, and would probably cease were the circumstances fully known to the country. While the universities demand, and undoubtedly require, ampler funds, it may astonish many to know that divinity students in Scotland at present are trained at a cost of £100 each per annum. This is a country which does not possess a chair of Modern History. Let St. Andrews draw closer to the new college in Dundee, and modernise her system by teaching subjects now clamorously demanded by the hundreds who care nothing for Hebrew or ecclesiastical history; let her give greater heed to the teaching of science in its various departments, and there will be less need ere long for the attitude of supplication now so constantly assumed by her able principal.

PERNICIOUS ANÆMIA.

FACT and fancy are often strangely blended in medical science. Some observations of great interest regarding the pathology of pernicious anæmia have been recently published by Professor Frankenhauser of Zurich, in the *Centralblatt für die Med. Wissensch.*, and have been made by him the ground for a theory of its etiology about as improbable as any theory which has ever been proposed to explain the origin of a disease. In Zurich pernicious anæmia is said to be common in pregnant women, and in a series of such cases Frankenhauser has found in the blood a number of small, spherical, mobile bodies, about one-tenth of the diameter of a blood-corpuscle in size. Each was furnished with a minute cilium-like process, visible only with difficulty. Other bodies were also seen, larger, or rather longer, which seemed to him to present a transition from the first to bicellular organisms. These had no cilium, and were far less mobile. The smaller round bodies were extremely lively, rapidly changing their place, like spermatozoa. In one case they were present in large numbers, not only in the blood of the mother, but also in that of the newly born child. In both the blood-corpuscles were of normal size, and showed no transitional forms intermediate between them and the smaller micrococci just described. Since the latter were present in the blood of all the cases of pernicious anæmia, and not in that of other pregnant women, it seems justifiable to regard them as connected with the disease; and Frankenhauser believes that he has now discovered the way in which they get into the blood. The most significant changes were found, post mortem, in the liver. In severe cases the hepatic cells, especially in the left lobe, were found to contain numerous filaments, composed of single rows of minute organisms, which are assumed to have found their way into the organ from the intestine by means of the bile-ducts, and to have grown from the biliary capillaries into the liver-cells, distending them, and passing thence into the blood-capillaries. In the latter they hinder the circulation, so that the capillaries become much distended. A section of the organ, placed under the microscope, gives the impression that the liver is congested, and the seat of some diffuse growth. In the blood of the hepatic vein these organisms are present in great abundance, and thus they attain the general circulation. The slight jaundice present in these cases is due, it is supposed, to these changes in the liver. Most physicians who have studied pernicious anæmia will be inclined to doubt whether Frankenhauser's cases ought to be ranked in that category. The perfectly normal character of the blood-corpuscles is a feature in which they differ essentially from the usual characters of the disease. It is, indeed, not unlikely that more than one disease is included under the term, which is freely used to designate all progressive varieties of anæmia the nature of which is unknown, and it is even questionable whether "mysterious anæmia" might not be substituted with advantage for the current name. But the facts described by Frankenhauser are unquestionably of much interest and of great significance, whether their nature be or be not as he imagines. But the etiological theory which he suggests is certainly a strange one. He finds a close resemblance between the organism in the liver and that which has been ascertained to occur in caries of the teeth in the observations, for instance, of Miller, to which we lately referred. All his patients had caries of the teeth. Caries of the teeth is common in Zurich, and so is pernicious anæmia. Therefore the fungus from the carious teeth finds its way by the stomach and bile-ducts to the liver and is the cause of pernicious anæmia. Unfortunately caries of the teeth is universal and frequent, while pernicious anæmia is extremely rare, and caries is apt to make rapid progress during pregnancy whatever the health of the patient.

HORSE GUARDS' WISDOM!

WE learn from the *United Service Gazette* that "a permanent Committee has been appointed by the Horse Guards to report upon such questions as may be laid before it in connexion with the dress, equipments, &c., of the army." The names of the officers composing this Committee are given by our contemporary, and comprise four colonels, three lieutenant-colonels, one assistant commissary-general, and one deputy commissary-general, but no medical officer. Is it possible that it can never have occurred to H.R.H. the Field-Marshal Commanding-in-Chief that the dress and equipment of soldiers may have an important influence on their health and efficiency, and that on these points the opinion of a skilled adviser, such as an experienced medical officer would be, might prove of great value in preventing the introduction of insanitary and therefore injurious modifications? Or is it that he is afraid of their starting difficulties, on the score of health, in the way of the introduction of some of those military innovations which sacrifice all other considerations to smartness of appearance? Or is it simply that he will have no interference which he can avoid on the part of the doctors whom he loves so well? To whatever cause it may be attributable, we cannot but think that the appointment of a Committee on such an important subject, with the exclusion from it of a class of officers who are specially qualified to give a valuable opinion on many of the points to be considered, is eminently characteristic of the wisdom which pervades the measures of our military authorities.

A DANGER OF THE PERIOD.

EVERY period has its special dangers, sources of peril which are created by the manners and customs of the time. Prominent among those of the recent past and the present must be placed the popular exercise of bicycling. Those who sit astride these monstrous vehicles are themselves in danger, not merely of injury to limb, but of maladies which have not yet had time to assert their presence in the midst of the population, but which may be confidently anticipated within the next two or three decades if the whims of the moment be much longer perpetuated. It is not alone, however, the bicyclists who are in peril; the presence of these unnecessary hobby horses in public thoroughfares is a ceaseless terror to horses, to drivers, and to the public generally; and it cannot be doubted that they add considerably, indirectly if not directly, to the danger of

the streets. Why, in the name of common sense, are not bicycles classed as vehicles and taxed? The carriage, for such it is, constitutes a pleasure-trap pure and simple. It is only in very few instances in the outlying districts that a bicycle is used for any other purpose than that of amusement. Surely the owners of these "carriages" ought to be made to contribute to the revenue as other classes of the community who indulge in vehicular luxuries contribute! The riders of bicycles have introduced a new and wholly needless danger into our streets, and they annoy the driving, riding, and walking classes considerably. They ought to "pay for their whistle." Against the unaccountable immunity from special taxation which is now accorded we must take leave—in view of the approaching Budget—to protest.

THE FATAL EFFECTS OF THE RECENT LOW TEMPERATURE.

THE Registrar-General's Weekly Returns for the last three weeks of March afford the means of estimating the direct effect of the recent unseasonably low temperature. On 1st March the mean temperature at Greenwich Observatory was 44·8° and 4·5° above the average, after which it was continuously below the average until the end of the month, except on the 30th, when a slight excess prevailed; on five days the average deficiency of temperature exceeded 10°. The annual death-rate in the twenty-eight large towns dealt with in the Registrar-General's Weekly Returns averaged only 22·8 per 1000 in the first ten weeks of this year, which was no less than 3·2 below the average rate in the largest English towns in the corresponding period of the last five years. The effect of the cold weather was fully shown in the returns for the last three weeks of March, in which the mean death-rate rose to 27·1, and very considerably exceeded the average for the period. The deaths in those towns, which averaged but 3753 in the ten weeks ending 16th March, averaged 4477 in the three weeks ending 31st ultimo, showing an excess of more than 2000 deaths in the three weeks. But for the advent of this cold weather, the English death-rate in the first quarter of this year would have been almost unprecedentedly low; the death-rate from the principal zymotic diseases in these twenty-eight towns having been but 2·3 per 1000. If, as is usually the case, the influence of the late low temperature has been still more fatal in rural than in urban districts, the direct effect of the cold March just ended may be estimated at not less than ten thousand deaths in England and Wales alone.

TUBERCLE OF THE CHOROID.

THE imperfection of our knowledge of the subject of tuberculosis of the choroid is directly due to the want of complete examination of the fundus oculi, both during life and after death. Difficulties, not wholly insurmountable, attend both the clinical and anatomical investigation. Education in the use of the ophthalmoscope with the direct and indirect methods is of prime importance for the clinical observation; the use of mydriatics is an almost essential aid; and in the case of children a certain degree of anæsthesia is of much value. At the post-mortem table it is only the backs of the eyes, as a rule, that may be removed for thorough observation, owing to the disfigurement which would be entailed by the total extirpation of the eyeballs. A valuable contribution on the Miliary Tuberculosis of the Choroid is contained in Virchow's *Archiv* for March, by Emil Bock. Twenty-three eyeballs taken from fifteen individuals who had succumbed to acute miliary tuberculosis at various ages were examined; nineteen eyes were found to be affected with tubercle. It is to be regretted that the two eyes were not investigated in every instance. The number of tubercles in a single organ of vision varied from two to forty-nine. The size of the individual nodules differed very much; many were about one millimetre in diameter, but some required the microscope for their detection, whilst others were large enough to stand above the level of the surface. The larger tubercles were generally, but not invariably, situated about the optic nerve; the microscopic tubercles were represented in every part of the choroid. As would be expected, the smaller the tubercle the more was it limited to the chorio-capillaris, whilst the larger sizes tended to involve the other laminæ of the choroid. There was nothing worthy of note in the histological characters. Minute hæmorrhages were observed several times in the medium-sized nodules. A feature which has been pointed out by Poncet is an infiltration not limited to the neighbourhood of the sharply defined tubercles, but extending throughout the tissue in a diffuse fashion. In eighteen globes the seat of choroiditis, ten times there was iridocyclitis. An actual tubercle in the iris was found only once. Although the ciliary region was in many cases the seat of marked infiltration, a tubercle was not detected there in any instance.

CRUELTY TO PIGEONS.

THE gunmakers are up in arms against the Pigeon-shooting Bill introduced by Mr. Anderson. So far from this fact influencing the opinion of our legislators against that measure, it ought to enforce the need of legislative interference. If the question is one of magnitude and urgency to the gun trade, that is a conclusive proof of the scale on which "pigeon-shooting" exists as an amusement, and it may be assumed that the atrocities which are undoubtedly practised at the larger meetings are not less, but rather more, common at the smaller and obscure matches. "A Gunmaker," writing to *The Times*, attempts to dispose of the notion that cruelties occur because where an automatic apparatus is used for throwing down the traps it is impossible for anyone to know which of several traps will be opened, and it would, therefore, be useless to maim any particular bird. "A Gunmaker" must either be very much in the dark as to the way in which matches are commonly conducted, or he must be deficient in the power of looking at two sides of a question, seeing that he adduces this argument. It will be evident on a moment's reflection that if the Bill "comes like a thunderbolt" upon the gun trade, and if its effects are likely to be so "disastrous" to the gunmakers that an appeal needs to be made on their behalf, the number of guns engaged in pigeon-shooting must be larger than can be required for meetings where "the automatic machine" is used; and "A Gunmaker" himself admits that "when only one or two traps were used, or when five were used and were pulled by a cord held in the hand, it may have been that unprincipled scoundrels have maimed a bird in some way or other in order to make an easy shot for some unprincipled shooter who had bribed them." This admission obviously disposes of the whole question. It cannot surely be necessary to say that in the great majority of cases the old traps pulled with a cord *are* still used, because the smaller meetings and matches far exceed in number the larger. It is not, however, as "A Gunmaker" may or may not know, to make a bird "an easy shot" it is maimed. Not unusually the pigeons supplied are so tame that they will not fly. We have seen the dogs take them off the ground after the fall of the traps, the birds having positively refused to move! With a view to prevent this, and to give them some semblance of vitality, they are so punished as to be made to suffer the most horrible pain! It is not worth while to discuss the matter further. The Bill must pass. Public decency and humanity require it, the interests of the gun trade notwithstanding.

DEATH FROM A POST-MORTEM WOUND.

ANOTHER young and promising member of our profession has fallen a victim to a slight scratch received while making a post-mortem examination. The deceased gentleman—Mr. H. L. Manby, a younger brother of Mr. F. E. Manby, of Wolverhampton—was asked to assist Mr. C. A. Newnham in making an autopsy in a case of congestion of the lungs and pleurisy. He unfortunately received a scratch on his thumb from the jagged edge of a rib. In a few hours there was marked constitutional depression; signs of local inflammation and lymphatic absorption quickly followed, and death resulted from blood-poisoning. Although familiar with such cases, each one as it arises excites the strongest feeling of regret and pity; and when the victim is a young man of promise, cut off at the outset of an apparently brilliant career, such feelings are greatly increased. We have yet to learn the true explanation of such cases. Pricks and scratches at post-mortem examinations are of frequent occurrence; it is, however, but a small minority which are attended with ill effects, and this very fact constitutes one of their dangers, for it tends to beget carelessness. It has been asserted that the general state of the health of the individual is an important factor, and to an extent this is certainly the case; but it quite fails to explain those instances where severe symptoms set in a few hours after the receipt of a trifling wound. This may occur in the robust, and Mr. Manby is stated to have been in excellent health at the time of his accident. There must rather be in all such cases an inoculation of some virulent poison which quickly passes into the blood and exerts its pernicious influence. In other cases the effect of the poison is more purely local. We hope that the distressing death of Mr. Manby will be of service in calling renewed attention to this subject, and in impressing the need for the utmost caution in making post-mortem examinations.

PATENT MEDICINES.

IN an interesting little paper in the current number of *Macmillan's Magazine* Mr. Hubbard, L.R.C.P., discusses the subject of "patent medicines." The evil of a practically unlimited sale of *poisons*, under the thin but misleading disguise of "patent medicines" is much to be deprecated. It would not be tolerated for a single instant but that the State derives a considerable revenue from the sale of stamps. In the year 1881–82 the proceeds of this tax amounted to £144,883. The Legislature should take the bold step of sweeping this source of revenue away altogether, and prohibiting the sale of any proprietary medicines whatsoever which were not openly declared as consisting of drugs with which the public are familiar, and of which the doses and properties are known. We do not think the sale of poisons in disguise should be a profitable trade speculation, and we are strongly of opinion that the State should not derive its income from a traffic which is clearly not for the public good.

THE BATHS OF BATH.

IT seems as remarkable as it is certainly lamentable that the spas of our own country should be so largely overlooked by English people, as they undoubtedly are, in favour of places abroad whose only superiority for the most part is that they happen to be patronised by the crowned heads and other distinguished personages of Europe. Amongst thermal springs of the world none can boast of a higher or more time-honoured reputation than those of the famous city of Bath—claiming as they do a history co-eval with the commencement of the Christian era. As with politicians so with places, popularity is ever shifting and uncertain, and so it has come to pass that the furore of favour in which the Somersetshire spa was held in the last century had until lately given place to almost total neglect. Attempts have from time to time been made to revive public interest in these springs, and the completion of recent works in connexion with the bathing establishments of the city afforded an occasion this week for a visit to them by the Mayor and Corporation, which assumed the form almost of a civic ceremonial. The virtues of the waters of Bath were deservedly extolled by several speakers, and it is satisfactory to find that the number of both bathers and drinkers is largely increasing.

THE GLASGOW "INFIRMARY SQUABBLE."

OUR Glasgow correspondent writes:—"What has now come to be known as the 'Infirmary squabble' still drags its slow length along. The warfare is as bitter as ever, and certainly the tone of the contest has not risen during the last few weeks. In one of our local papers, indeed, it has taken the form of a liberal interchange of mere personalities. One of the surgeons accuses the late chairman of the Infirmary Board of breaking the rules he should have set the example of keeping; this gentleman retorts after his own fashion by asking that surgeon to explain publicly why his mortality is double that of one of the other surgeons. The public meanwhile looks on unedified, and horrified that such things should be in one of our noblest public charities. The attention of the public has thus most unfortunately been withdrawn from the main points at issue, and a large amount of ignorant and mistaken sympathy with those opposed to the professional view of the matter has been developed. It is to be deeply deplored that personalities of the kind mentioned have not been avoided. Had the silence so discreetly maintained by the rest of the staff been also observed by the surgeon above referred to till the committee of managers appointed to investigate the whole matter had given in its report, the profession would now have stood in much higher esteem among the public of Glasgow. This committee's report is now nearly ready, and concerns mainly the question of the administration of anæsthetics. A good deal of evidence has been collected as to the practice of other hospitals in this matter, and doubtless some scheme for its regulation here will be proposed for the acceptance of the managers. Should, however, the presenting of this report result in the reinstatement of the former chairman of the Board, who, as I formerly intimated, has resigned, further complications may be looked for."

THE NORWICH VACCINATION INQUIRY.

WE have received a copy of the report of the Norwich Board of Guardians on this subject. The report goes carefully into the subject, and practically adopts Dr. Buchanan's view that the only adequate cause suggested by the evidence in the first group of cases is the introduction of septic material into the vaccine wound by means of ivory points repeatedly used in vaccination, and for this occasion imperfectly cleansed, and that Dr. Buchanan disposes effectually of the difficulty which withheld the inspectors from adopting this theory, and establishes the extreme probability of the mischief having been thus occasioned. The guardians also adopt the recommendations embodied in Dr. Buchanan's minute, and thus there is every promise that a recurrence of such a calamity as that which gave rise to the inquiry will be in future avoided. A second report, dealing with the allegations against Dr. Guy, expresses a strong opinion that the charge of drunkenness brought by one of the witnesses was not sustained. With regard to the statements that Dr. Guy had previously forwarded to the Local Government Board unsealed tubes and lymph containing blood, the guardians urge that, as the authority responsible for the carrying into effect of the Vaccination Acts, they should have

been informed of this irregularity. An effort is made in the report to show that the silence of the Local Government Board on this point until the recent inquiry, and the subsequent granting to Dr. Guy of an award, amount to a condonation of his offence. Whatever may be the view of the guardians on that point, we cannot but feel that the whole circumstances connected with Dr. Guy's conduct as a public vaccinator should be taken into consideration in dealing with this painful case.

TESTIMONIAL TO DR. CHARLES R. BROWN.

WE have been requested to draw attention to the case of Dr. C. R. Brown, recently practising at Eastbourne, and to invite the aid of his more favoured brethren. This gentleman, who was busily and successfully engaged in practice, had an apoplectic seizure last December; he is now completely paralysed on the left side, and there are signs which point rather to an aggravation than to an alleviation of his condition. This affliction befalling him at the early age of thirty-seven years has both deprived him of his income and prevented his making due provision for his wife and five children. Under these painful circumstances an influential committee has been formed to raise a testimonial to Dr. Brown, and we shall be glad if by calling attention to the matter we can add to the comfort of a brother so sorely tried. Subscriptions may be paid into the fund at the Lewes Old Bank, to any member of the Committee at Eastbourne, or to Mr. F. Wallace, 96, Cazenove-road, Upper Clapton.

INSURANCES AGAINST ACCIDENTS.

TWO members of the profession have within the past few weeks met with fatal accidents. It will be remembered that Dr. Ambrose C. Hughes, of Liverpool, was thrown from his gig and sustained such serious injuries that he died in a few days. The second case is that of Mr. H. L. Manby, of Brewood, near Wolverhampton, referred to in another column, who died on the 2nd instant from blood-poisoning. Attention has lately been drawn to the establishment of provident societies for the profession to meet emergencies arising from long service and ill-health, and another direction in which this may be done is by insuring against accidents such as we have referred to, especially as the cost of this description of insurance is very trifling. Both the deceased gentlemen had taken this precaution, and their families consequently will reap the reward of their prudence.

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of the Senate held last Tuesday, a report was read from the Standing Committee in reference to the new Medical Bill now before Parliament. The committee suggested that a nominated deputation from the University should proceed to London for the purpose of endeavouring to obtain such modifications of the Bill in reference to the interests of the medical graduates and students as might be found desirable. The Senate approved of the recommendation of the committee, and the deputation will leave for London without delay.

SIXPENNY TELEGRAMS.

THE medical profession will greatly appreciate the concession which the House of Commons has, at the instance of Dr. Cameron, affirmed to be desirable with regard to a reduction in the minimum fee for telegrams. We very much doubt whether the revenue of the department *will* be injuriously affected by the proposed lowering of rates. Should the Treasury sanction the concession—which the Postmaster-General, Mr. Fawcett, is evidently willing to make—it is likely that immediate advantage will be taken of the increased facilities afforded for communication by this means. A very large proportion of ordinary letters relating to business appointments, and other matters which admit of a brief intimation, would be answered by telegraph if the charge were sixpence instead of one shilling. There is not, of course, the slightest fear of ultimate loss; in the end a gain must reasonably be expected, and there is a possibility that a very prompt recognition of the liberality now likely to be shown by the Post-office may ensue, so that even within the year in which the concession is made there may be a satisfactory return.

VOLUNTEER ARMY MEDICAL ORGANISATION.

MR. JAMES CANTLIE, Surgeon-Major G. J. H. Evatt, and Messrs. Andrew Maclure and W. H. Platt, have issued a circular calling a meeting of representatives of the London Medical Schools, and of surgeons connected with Volunteer Corps, for the purpose of forming a Volunteer Hospital Corps. The meeting is to be held at the Board Room of Charing-cross Hospital, on Wednesday, April 11, at 8 P.M.

A RECENT number of the *Cologne Gazette* contains an appreciative notice of Professor Paul Victor von Bruns, who died at Tübingen on March 19th. For forty years Professor Bruns was attached to the Tübingen University in an academical capacity. After having worked with zeal in various branches of surgery, he devoted himself of late years to the special treatment of laryngeal affections. As an author, von Bruns distinguished himself by his "Handbook of Practical Surgery," "Laryngoscopy and Laryngoscopical Surgery," "Galvano-Surgery," and other works.

THE Kingston Rural Sanitary Authority, having selected a site for an infectious hospital for their district, have applied to the Local Government Board for a loan. Last week Mr. Arnold Taylor and Dr. Thorne Thorne, inspectors of the Board, after visiting the intending site, held a public inquiry as to its suitability for the purposes of a hospital. The evidence tendered was very conflicting; but as the offer of the vendor to sell is limited to a few days, the decision of the Board is expected to be made at once.

THE Lancashire and Cheshire branch of the British Medical Association, numbering nearly 900 members, in public meeting assembled, on March 20th, resolved that the President and Secretary of the branch should be requested to sign a petition in favour of the Bill for Amending the Medical Act, brought into the House of Lords by Lord Carlingford. The petition has accordingly been signed by Dr. Borchardt, President, and Dr. A. Davidson, Secretary. The feeling in these counties in favour of the Bill is said to be very strong.

A CORRESPONDENT of an evening newspaper makes a statement which seems almost incredible, from its fiendish ingenuity. The statement is to the effect that the Fenian agitators have, in order to be revenged on those who have distinguished themselves as opponents of lawlessness, hit upon the device of sending to their residences parcels of infected linen, directed to the lady of the house. It is something new for contagium to be employed as a weapon of socio-political warfare.

AN attempt is, it appears, to be made at last to render wholesome the pestilential plains of the Campagna. A project of law is about to be laid before the Italian Chamber which provides for the drainage and cultivation of this malarious region.

A LETTER has been sent to the Home Secretary by the Presidents of the College of Physicians and of the College of Surgeons, in obedience to a request made at a meeting on April 2nd of the Association for the Advancement of Medicine by Research, informing Sir William Harcourt of the almost unanimous feeling of the Fellows and Members of the two Colleges against the Bill for the Abolition of Vivisection now before the House of Commons.

INSPECT.-GEN. ALEX. DAVIDSON, M.D., who died at Cheltenham on the 31st ult., was one of the oldest members of the Royal College of Surgeons. He was born in 1796, and was admitted a member of the College in September, 1818. He entered the East India Company's Service as assistant-surgeon in 1819, and had seen a great deal of active service.

DR. AUSTIN FLINT is contributing to the *New York Medical Journal* a series of articles on Medical Ethics and Etiquette, each article to consist of a portion of the code of ethics adopted by the American Medical Association, with commentaries. The series cannot be otherwise than interesting and instructive.

THE new Anatomy Act has passed the Pennsylvania State Senate, and is now before the House of Representatives. In the opinion of some of our American contemporaries the measure, with its amendments, is not without serious faults. Another Bill before the Legislature of the same State deals with the management of lunatic asylums.

THE quarantine restrictions imposed upon vessels arriving at Natal from Capetown, in consequence of the recent small-pox epidemic at that port, have, according to a telegram from Durban, now been entirely abolished.

WE regret to learn the diphtheria has again broken out at Pirbright, near Guildford, where an official investigation was recently conducted by Mr. Power, Local Government Board Inspector.

AT the meeting of the City Commissioners of Sewers on Tuesday, it was stated that the pollution of the Thames by sewage was destroying the passenger traffic on the river and greatly injuring the trade in general of the port of London.

DR. ARGYLL ROBERTSON has been appointed Lecturer on Diseases of the Eye in the Faculty of Medicine of Edinburgh University.

NO less than 126 students have entered for the first half of the examination for the diploma in Surgery of the Royal College of Surgeons in Ireland.

THE appalling statement has been made that over six thousand women die yearly in the United States from attempts to destroy unborn children.

DR. MURRELL has been appointed Assistant-Physician to the Westminster Hospital. The last election was in 1877, when Dr. Hughes Bennett was the successful candidate.

A VERDICT of manslaughter was returned, at an inquest held in Southwark last week, against a member of the Peculiar People sect for neglecting to obtain medical assistance for his child, who died from tubercular disease of the lung.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Statement, presented by the President and Vice-Presidents to the Council of the Royal College of Surgeons of England, and adopted by the Council on the 29th March, 1883, respecting the Provisions of the Medical Act Amendment Bill introduced into the House of Lords (1883).

THE Council of the Royal College of Surgeons of England desires to avail itself of the opportunity afforded by the postponement of the second reading of the "Medical Act Amendment Bill," just introduced by her Majesty's Government into the House of Lords, to express its opinions on the principles and details involved in certain of the provisions of the Bill.

The Council is anxious, at the outset, to remark that it has long been prepared to take part, and is now ready to co-operate, in a duly organised combination or unification of the Medical Examining Authorities in its own division of the United Kingdom, for the purpose of securing such a complete qualifying examination as would, for England at least, be productive of great and obvious advantage to medical education, would raise the status of the general practitioners of medicine, surgery, and midwifery throughout the country, and thus be of service to the community.

After a careful consideration of the proposed Bill, the Council feels bound to state that, in its opinion—whilst some of the provisions of the Bill appear to be well adapted to bring about a consolidation of the present examining authorities in each division of the kingdom, and to provide for other requirements of home, colonial, and foreign practitioners, in relation to each other and to the public,—there are other provisions which are open to grave objection, not merely because they would surely tend to diminish the influence of existing institutions of acknowledged experience, of long established reputation, and of recognised utility, which are able and willing to do all that is essential to accomplish the improvements demanded, but also because the new authorities and powers proposed to be created by the Bill for accomplishing the same ends could not possibly realise better examinations, and therefore better results for medical education, for the medical profession, and for the public.

On behalf of an institution which takes the most active part and by far the largest share in the work of medical examination in the whole kingdom, the Council of the Royal College of Surgeons of England considers it to be its duty to set forth the conclusions at which it has arrived, first, upon those provisions of the Bill which affect medical education and examinations, and the grant and registration of medical titles; and, secondly, upon various other provisions which relate to the general working of the contemplated measure.

1. PROPOSALS RELATING TO MEDICAL EDUCATION AND EXAMINATIONS, AND TO THE GRANT AND REGISTRATION OF MEDICAL TITLES.

Medical Boards.—The proposals referring to the functions and duties of Medical Boards are to be found distributed through many different parts of the Bill, and require to be carefully followed throughout. Thus it is proposed (Clause 9) to establish three Medical Boards, one in each division of the kingdom, the members of which are to be elected by the several existing medical authorities in the corresponding division. These Boards (Clause 10) are to frame "schemes" for securing a single and efficient qualifying "final examination" each in its own division of the kingdom, the admission to such examination being dependent on the passing through a "prescribed course" of education and examination by competent recognised examining authorities, also to be defined and prescribed by the Medical Board of that division of the kingdom (Clauses 19 and 20). Such a proposal, carried out justly and consistently with the acquired rights and properly exercised privileges of existing institutions, would so far fulfil the purposes which the College of Surgeons had in view, in agreeing to take part in the so-called "conjoint scheme," which was rendered abortive by the difficulty of obtaining similar combinations in Scotland and Ireland, and by the continual expectation of legislation on the subject. The College is even now proposing, at some risk, it is thought by many, to its popularity and prosperity, to combine with

the Royal College of Physicians of London to obtain similar ends, without further legislation, under the existing powers of the Medical Acts now in force, in the hope that their example may be sooner or later followed, on a similarly complete plan, in Scotland and in Ireland. If the Colleges of Physicians and Surgeons in those divisions of the kingdom were also thus to combine, the solution of the problem of reducing the number of separate examining authorities, and of equalising and supervising their examinations, would be materially aided, and the need for legislative interference would be no longer urgent, except for the purpose of securing that no person could be registered without a double qualification in medicine and in surgery. But, in the Bill now before the House of Lords, it is proposed to incorporate these three elected Medical Boards, to give them an existence in perpetuity (Clause 9, Section 6), to enable them to acquire property, to empower them to receive fees, and to pay the examiners and the expenses of the final examinations (Clause 38). It is further proposed, subject no doubt to the approval of the Medical Council and Privy Council, that these Boards may declare themselves recognised examining authorities for the earlier examinations (Clause 20, page 11, five words in line 3); although they (Clause 9, Section 9) may be in part composed of non-medical members. Against these several proposals the Council of the College of Surgeons energetically protests. It is the opinion of the Council that the functions of the Medical Boards, if they should be established, should be strictly limited to framing "schemes" for the course of medical education, for the conduct of all the necessary professional examinations, both early and final, for the due certification of the results of such examinations, and for such general supervision of the examinations by themselves, or by appointed visitors, as would enable them to provide that such schemes were properly carried into effect,—of course with power and duty to report to the medical authorities and to the Medical Council thereon. Such would be legitimate functions and duties of Medical Boards, elected by the constituted medical authorities, and placed, as it were, in mid-relationship between those authorities and the Medical Council. On the other hand, to endow these Medical Boards, elected by the medical authorities, with such independence and power as is contemplated in the Bill, would be to create, by the action of the already constituted medical authorities, new and unnecessary outside authorities, equal in influence to those authorities themselves; and, indeed, taken in connexion with other provisions in the Bill relating to the proposed sole qualifying medical title and its registration, to which further attention will be presently directed, superior to those authorities. In the opinion of the Council, the loss or diminution of privilege, position, and influence, in this way inflicted on the constituted medical authorities would be accompanied by no commensurate advantage to the profession or to the public. The employment of such intermediaries for such purposes would yield no results better than those which are attainable by leaving such functions in the hands of the combined constituted authorities themselves. Under the Bill, for example, the Council of the College would have, about once in five years, the small privilege of electing one-fifth of the representatives on a Medical Board, to which would be assigned the power of declaring the competency of the Council itself as a "recognised examining authority," to conduct, or to appoint its examiners to conduct, the *earlier* examinations, which are now its own of right; and, as regards the final or qualifying examination, admitting that that is to be held under a scheme framed by the Board, according to which the College would have no security that it could *appoint* the surgical examiners, it would not pay those examiners, nor would it pay the expenses of the examinations, and so would lose practical interest and control over the character and completeness of this final examination—an examination for the holding of which it has been specially chartered, to which it attaches the deepest significance, in relation to its duty to itself and to the public, and which it guards with a strictness which is believed (by some of its critics) to be needlessly severe.

Medical Titles and their Registration.—The objections which the Council of the College of Surgeons has thus urged to the endowment of the proposed Medical Boards, with a corporate existence, with independent pecuniary resources, and with the power to receive fees and to pay the salaries of examiners and the cost of examinations, and therefore with the influence and rights which would indubitably flow from such endowments,—acquire still greater force when the further proposals of the Bill in regard to the grant and registration of medical qualifying titles are taken into consideration. Thus the sole qualifying examination being the final examination conducted under the scheme framed by the Medical Board for England, in which the surgical examiners would presumably be those acting for the Royal College of Surgeons, the *only qualifying title* obtainable by home practitioners, on and after the day on which the contemplated measure comes into operation, would be that of "Licentiate of the Medical Council in Medicine, Surgery, and Midwifery" (Clause 27); and this is to be the only medical qualifying title which would after that date be entered upon the Medical Register, in its first appropriate column of titles (Clause 29). The intention and effects of these proposals, at which the Council cannot help expressing both surprise and regret, would seem to be to exclude from the Register in future the title of M.R.C.S.E., as it is now granted, as well as other similar "lowest" qualifications. At the same time, these proposals would admit, on the part of the Medical Council, a "licensing" as well as a "registering" function—a singular and unheard-of anomaly in regard to a body which is not itself to examine. It further seems to the Council that this exclusion of the lowest titles from the columns of the Register is intentionally encouraged or invited; for (under Clause 36) it is proposed that "any of the medical authorities sending representatives to the Medical Board may, if it thinks it expedient to do so, admit *without further examination* any person who has passed a final examination under the Act to its lowest qualification;" in which case these lowest qualifications could not be registered in the column for "higher medical titles" (Clause 27, p. 13), which are defined to be such as "in the judgment of the Medical Council appear to be granted on a substantially higher degree of knowledge, or as a testimonial of higher distinction" (Clause 27, p. 14). The Royal College of Surgeons, and any other institution which continued to grant "lowest" qualifications, would accordingly be placed in this dilemma, either to add to their examinations for their lower qualification something that would, in the judgment of the Medical Council, imply a substantially higher knowledge, or submit to the exclusion of the title from the Register. In the former case the Council of the College feels that it would be acting inconsistently in giving a further troublesome and superfluous examination to persons whom, by their own examiners, under a scheme, it had already declared competent to practise surgery; it would expose itself to the charge of seeking an opportunity of securing or augmenting its diploma fees; and it would bring its Membership, or lower qualification, thus elevated, into collision with its higher one, the Fellowship. Nor could it be expected that the Fellowship would be much more frequently taken than it is now. In the latter case (that is, of the exclusion of the lower qualification of the College from the Register) the following undesirable consequences would ensue:—The title of M.R.C.S.E., which is now registrable, and which would remain registrable under the new Act, in respect of persons already in possession of it, would not be registrable in respect of persons whose first registration took place under that Act, even though they did possess it; though not registered, it might be used, notwithstanding the general and most desirable prohibition in the proposed Act of the use of any medical title or designation whatsoever which is not entered on the Register (Clause 28, Sect. 2), a special provision in that clause (ditto, p. 15) enabling it to be so used; the fraudulent assumption of the title would be more easy, and the detection of the fraud and its punishment more difficult; lastly, whilst the lower qualifications of the Royal College of Surgeons and of other authorities which grant more than one qualification would thus be excluded from the Register, it is conceivable that any institution which grants only one qualification would hold to the interpretation that its *single qualifying title* might be registered. The Council of the College of Surgeons cannot acquiesce in either of the alternatives thus explained. It cannot see its way legitimately to increase the examination for its Membership; and it cannot fail to foresee that were that diploma deprived of its character as a qualifying title it would, after no great interval of time, cease to be sought for. Whilst, therefore, as already stated, the Council enters its decided protest against the transference of any of its functions to a Medical Board other than a share of those which relate directly to medical education and examinations, it still more decidedly protests against the proposed exclusion of its now registrable

title of "Member" from the Register of future practitioners. The Council recognises in this proposal a distinct ignoring of the opinion expressed by influential witnesses before the Royal Commission, and on other occasions, as to the desirability of all registered practitioners becoming not only licensed to practise, but affiliated either to a university or to at least one existing medical corporation. This proposal would interfere with the desired twofold result—namely, that of the grant both of a licence and of a diploma after one complete and adequate examination. The proposal likewise ignores the belief expressed by others that in future, under the plan of a common licence, separate from an affiliating diploma, most persons would content themselves with a licence and not proceed to affiliate. The Council would also direct attention to the fact that, although the "Medical Act Amendment Bill" is stated to be framed on the basis of the Report of the Royal Medical Acts Commission, the proposal in regard to the non-registration of the lowest medical titles is in conflict with paragraph 80 of that Report, which is as follows:—"We think that all titles now registrable, if recognised by the Medical Council, and all titles of a similar character hereafter recognised by the Medical Council, should be registrable." The Council, in conclusion, feels bound to record its strong objection to what it regards as an attempt to substitute the anomalous title of "Licentiate of the Medical Council," conferring no sort of privilege or status beyond what would be obtained by the simple insertion of a person's name in the first column of the Register, for the older and time-honoured distinction attached to its Membership, or so-called "lowest" qualification. Moreover, the position of a present Member of the Royal College of Surgeons, duly registered, would be liable to be brought into disadvantageous comparison in a coroner's or other court, or elsewhere, with that of a person registered as a "Licentiate of the Medical Council," since the latter might claim that the title of member of the college having been discredited by its abolition, was inferior to his own. The Council desires, in leaving this subject, to reaffirm its conviction as to the advantages of ensuring, in the simplest and least expensive way, affiliation of a licentiate with some existing medical authority, both as respects the individual members of the profession and the public generally.

II. PROPOSALS RELATING TO DETAILS IN THE WORKING OF THE CONTEMPLATED ACT.

As regards these proposals, the Council desires to express very briefly the following opinions:—

1. *Constitution of the proposed Medical Boards.*—As the schemes framed by these Boards will chiefly affect the education and examination of future general practitioners and not of university graduates, and will therefore concern the corporate bodies more seriously than the universities, the representatives of the former authorities in England should not (Clause 9, Sect. 3) be in a minority on the Board. They are not proposed to be so in Ireland (Sect. 5). Contrary to the proposals (Clause 9, Sections 9 and 12), according to which "any person of full age" may be a member of a Medical Board, and "the same person may be a member of more than one Medical Board,"—all the members of a Medical Board should be members of the medical profession; and no person should be a member of two Boards.

2. *Constitution of the future Medical Council.*—With regard to the appointment of lay members on the Medical Council, it may be observed that the medical profession might well be regarded as capable of managing its own affairs; a layman might feel more difficulty than a professional member in arriving at decisions on professional questions; and the permission, as it now stands (Clause 14), would allow the election of an indefinite number of non-medical representatives, and therefore it ought, at least, to be expressly restricted.

3. *Duties of the Medical Boards.*—It would be better to leave the control of the preliminary examinations and of the registration of medical students to the Medical Council or its delegates, as now, and not transfer this work to the Medical Boards, as proposed in Clauses 19 and 38. It is important that the Medical Boards should refer their schemes, for consideration and comment, to the constituent medical authorities, as well as to the Medical Council, for approval; and the medical authorities should have a right of appeal to the Medical Council and to the Privy Council in relation to those schemes; this is not provided for in the Bill. The Medical Boards, presumably receiving no fees either for the registration of students or for any examinations, need make no payments. Their members should receive no compensation; their expenses in connexion with the framing of schemes and their office expenses in carrying these into effect by certification or otherwise should be paid by the authorities concerned in the examinations and in granting the affiliating diplomas. The expenses of visitations of the medical schools and of the examinations should be paid by the Medical Council, who would thus control the same. The power of authorising persons to prosecute for offences under the Act should not be exercised by the Medical Boards, and preferably not by the constituent medical authorities (Clause 28, Sect. 5); but it would be better to be in the hands of the Medical Council and of the public prosecutors. Neither should the Medical Boards have the management of the election of the representatives proposed to be returned as members of the Medical Council by the resident registered practitioners of the three divisions of the kingdom (Clause 55); for such work would be quite unsuitable and distasteful to a Board specially elected for duties of a totally different character. The discontinuance of the existence of Branch Councils, implied in the Bill, need not lead to the transference of unsuitable duties to the proposed Medical Boards; for, under the name of "Executive Committees," Branch Councils might be retained and perform such functions. Finally, the proposal to levy on every practitioner already registered an annual registration fee (Clause 38, p. 22) should be abandoned. It would certainly be evaded; it would be difficult to be enforced; to disfranchise a person for non-payment would be most unpopular; a person could not reasonably be removed from the Register on account of non-payment; five annual fees would have to be paid for one quinquennial electoral privilege; and it would be justly maintained that the original registration fee is sufficiently large to meet all the requirements of the Medical Council, which has accumulated in twenty-five years a capital of upwards of £25,000.

T. SPENCER WELLS, President.
JOHN MARSHALL, } Vice-Presidents.
J. COOPER FORSTER, }

March 29th, 1883.

ARMY MEDICAL SCHOOL.

THE Spring and Summer Term of the School opened on the 2nd inst., the number of surgeons on probation being twenty—viz., fifteen for the British and five for the Indian Armies. The opening address was to have been delivered by Professor Aitken. Our readers will learn with much regret that this eminent physician and teacher is confined to bed by a dangerous illness, which causes extreme anxiety to his colleagues and friends. Dr. Aitken, before his illness assumed the critical aspect it now presents, had in his usual painstaking manner collected and roughly prepared the materials for a most interesting discourse, but was unable to put them together in a form quite fit for delivery and publication. His colleague, Professor De Chaumont, undertook the painful duty of connecting the notes of his friend, and, so far as this could be done by another, of presenting the whole according to the evident intention of the author—a task which he accomplished with his usual ability. It was clearly Professor Aitken's intention to bring home to the minds of the young medical officers, at this the outset of their studies in the specialities of their profession as military surgeons, the terrible realities of war when undertaken without adequate preparation on the part of the military authorities, more particularly when the operations of war are conducted by commanders ignorant of the principles of their art, and of the laws governing the health of the armies in the field. The Professor selected the Walcheren expedition as one of the most signal examples on record in illustration of the proposition laid down. That disastrous expedition was organised by probably the most incompetent War Minister this country has ever seen, and it was commanded by the son of one of its greatest statesmen, devoid of every qualification for the duties he undertook. The medical authorities of the army were not consulted on a single point. Although it was well known to them that the seat of the projected war was at the time of the year selected for the operations notoriously unhealthy, an army of 40,000 men was notwithstanding landed on the most unhealthy part of the coast of Holland, without the most ordinary precautions to preserve their health, and with-

out the simplest appliances for so doing. One small hospital ship was all the accommodation afforded for the reception of the sick, and the supplies of medical officers, medicines, and medical comforts were inadequate to meet the wants of even a third of the sick. Representations made to the War Office resulted in an addition to the medical staff of one surgeon and a half a dozen hospital mates. The terrible results were shown in numerous tables, which must have brought home to those who saw them what war is when conducted according to the method of Lord Castlereagh as War Minister, and the Earl of Chatham as Commander-in-Chief. The military operations were of the most trumpery kind, and the losses from battle a mere fleabite; but the death-rate from disease was so shocking that the authorities, callous as they were to human suffering from preventable causes, would only suffer them to be inquired into by a Committee of the House of Commons sitting *in camera*. The Professor brought out one point full of interest and instruction—viz., that the highest death-rate was not among the troops fresh from England, but among those who had undergone the terrible hardships of Sir John Moore's retreat in Spain. The same thing, Dr. Aitken showed, was the case in the Crimea. The men who had gone through the fatigues and hardships of the occupation of Bulgaria were the greatest sufferers when the Crimea was invaded. The moral drawn by the Professor from the terrible details here given in merest outline was the necessity of preparations for the exigencies of war in the time of peace, the fatal consequences of leaving the arrangements for the health of armies in the field entirely to men who have no knowledge of sanitation, and the absolute necessity of perfect harmony between the responsible medical chief of the army in the field and the military and transport authorities. We have left Walcheren a long way behind us, but until it is better understood than it is now that medical authority must go along with medical responsibility, the lessons taught in the Army Medical School in all that is comprehended in the words military hygiene and medicine will fall short of what the public expect in modern war.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6201 births and 4826 deaths were registered during the week ending the 31st ult. The annual death-rate in these towns, which had steadily increased in the six preceding weeks from 21·9 to 26·1, further rose last week to 29·2. This rate was higher than that which has prevailed in these towns in any week since February, 1882. During the thirteen weeks of the past quarter, the death-rate in these towns averaged 23·8 per 1000, against 23·9 and 24·7 in the corresponding periods of 1881 and 1882. The lowest rates in these towns last week were 21·1 in Bradford, 23·4 in Leeds, and 24·9 in Cardiff. The rates in the other towns ranged upwards to 35·0 in Wolverhampton, 35·1 in Leicester, 35·9 in Halifax, and 39·8 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 399 and 348 in the two previous weeks, rose to 406 last week; of these 132 resulted from whooping-cough, 80 from measles, 73 from scarlet fever, 60 from "fever" (principally enteric), 37 from diarrhœa, 23 from diphtheria, and only 1 from small-pox. No death from any of these diseases was recorded in Norwich, whereas they caused the highest death rates in Preston, Sheffield, and Hull. Whooping-cough was proportionally most fatal in Leicester, Plymouth, and Hull; measles in Manchester and Sheffield; and scarlet fever in Sheffield and Leeds. The 23 deaths from diphtheria in the twenty-eight towns included 12 in London, 3 in Birmingham, and 2 in Liverpool. The fatal case of small-pox occurred in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals, which had been 94 and 93 on the two preceding Saturdays, was 90 at the end of last week; 11 new cases of small-pox were admitted to these hospitals during the week, against 13 in each of the two preceding weeks. The main cause of the increase of deaths last week was the excessive fatality of lung diseases; the deaths referred to these diseases, which had increased from 366 to 598 in the five preceding weeks, further rose to 671 last week, and exceeded the corrected weekly average by 151. The causes of 137, or 3·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Plymouth, Derby, and Cardiff. The proportions of uncertified deaths were largest in Bristol, Salford, Oldham, and Leeds.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 28·8 and 28·4 per 1000 in the two preceding weeks, rose to 30·4 last week, and exceeded the rate in any recent week; this rate was 1·2 above the mean rate last week in the twenty-eight English towns. The rates in the Scotch towns ranged from 20·7 in Edinburgh to 36·2 in Glasgow. The deaths in the eight towns included 116 which were referred to the principal zymotic diseases, showing a decline of 14 from the number in the previous week; these deaths were equal to an annual rate of 4·9 per 1000, which was no less than 2·4 above the mean rate from the same diseases in the large English towns. The fatal cases of whooping-cough, which had been 57 and 53 in the two previous weeks, further declined to 43 last week, and included 26 in Glasgow, 7 in Dundee, and 4 both in Edinburgh and Leith. The deaths from measles, however, were more numerous than in the previous week, 17 of the 23 being returned in Glasgow. The 13 deaths referred to "fever" included 5 in Greenock and 3 in Glasgow. Five of the 13 deaths attributed to diphtheria occurred in Glasgow, 4 in Edinburgh, and 2 in Greenock. The 6 fatal cases of scarlet fever, of which 3 were returned in Glasgow, showed a considerable decline from recent weekly numbers. The deaths from acute diseases of the lungs in the eight towns were 200, and exceeded by so many as 85 the number returned in the corresponding week of last year. The causes of 115, or nearly 16 per cent., of the deaths registered in the eight towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 35·4 and 40·4 per 1000 in the two preceding weeks, further rose to 43·0 in the week ending the 31st ult., and exceeded the rate that prevailed in any previous week of this year. During the thirteen weeks of the past quarter the death-rate in the city averaged no less than 35·2 per 1000, against 22·1 in London and 21·1 in Edinburgh. The 288 deaths in Dublin last week showed a further increase of 17 upon the numbers returned in recent weeks, and included 14 from whooping-cough, 13 from "fever," 4 from diarrhœa, and not one either from small-pox, measles, scarlet fever, or diphtheria. Thus 31 deaths were referred to the principal zymotic diseases, corresponding with the number in the previous week. These were equal to an annual rate of 4·6 per 1000, against 2·7 in Edinburgh and 2·5 in London. The fatal cases of whooping-cough, which had been 14 and 11 in the two previous weeks, rose again to 14 last week. The 13 deaths from "fever," moreover, showed a further increase upon recent weekly numbers. The causes of 53, or nearly 19 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT. — Deputy Surgeon General Grahame Auchinleck, M.D., to be Surgeon-General, vice J. S. Furlong, M.D., granted retired pay. Deputy Surgeon-General John Ogilvy, M.D., is granted retired pay, with the honorary rank of Surgeon-General. Brigade Surgeon Robert Wyatt Meadows, to be Deputy Surgeon-General, vice G. Auchinleck, M.D. Surgeon-Major Thomas Rudd, M.D., to be Brigade Surgeon, vice R. W. Meadows.

ARTILLERY VOLUNTEERS.—4th West Riding of Yorkshire: Surgeon George Stopford Taylor resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement.

RIFLE VOLUNTEERS.—18th Middlesex: James Ernest Lane, Gent., to be Acting Surgeon.

ADMIRALTY.—Staff Surgeon George Andrew Campbell has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of 23rd inst.

The following appointments have been made:—Surgeon Henry W. D. Walsh, to the *Repulse;* Michael Carmody, to be Surgeon and Agent at Arran Islands.

Correspondence.

"Audi alteram partem."

"COAGULA IN THE HEART."

To the Editor of THE LANCET.

SIR,—I have to thank Dr. Van Santvoord, of New York, for his courteous criticism of my remarks on Coagula in the Heart, dated 21st February, 1883.

The question of the period of formation of the clots did not escape me. The conclusion arrived at after much experience is that the formation of the clots precedes, and, in many cases causes, death.

I am aware that post-mortem colourless coagula are of common occurrence. I did not refer to these, but to thrombosis, sometimes embolism, which intervenes and causes death, that otherwise might not have occurred. Thrombosis in the right cavities and pulmonary artery may occur in the course, and towards the fatal termination, of several forms of disease; but as it then only contributes in part to the process of dying—though indeed it may be the actual cause of death, which otherwise would have been delayed,—I did not mean to call attention to it in this form, but to active thrombosis, which may occur when all seems to be progressing favourably, and seriously endanger or rapidly destroy life.

I do not think, as suggested by Dr. Van Santvoord, that the cause of death in the cases to which I referred was cardiac failure and degeneration, but obstructed pulmonary circulation, which was indicated by the symptoms during life and the appearances and character of the coagula after death. I quite concur, however, in the remark that clots such as I described, extending from the cavities into, and ramifying like the branches of a tree in, the pulmonary artery, are inconsistent with life. It was this, indeed, that I wished to affirm,—the gradual formation of the clot in the incipient stage caused most distressing symptoms; its extension death.

The pathogenesis of this thrombosis I do not attempt to explain; but I venture to repeat my belief that under certain circumstances it does occur, not only in persons suffering from septic conditions, or from exhausting disease or cachexia—and this possibly more frequently in malarial than in ordinary climates,—but that it may endanger or destroy life without the presence of these conditions, and notably after surgical operations and injuries in cases which, without its intervention, would have been free from danger.

I am, Sir, yours truly,

Wimpole-street, April 4th, 1883. J. FAYRER.

THE LOCAL TREATMENT OF ERYSIPELAS WITH WHITE-LEAD PAINT.

To the Editor of THE LANCET.

SIR,—I send you the particulars of two cases of erysipelas which have occurred in the wards of our infirmary during the last few days, and in which the treatment by white-lead paint, recommended by Mr. Barwell in your journal of March 10th, has been adopted with satisfactory results.

CASE 1.—Thomas C——, aged sixty-three, with large chronic ulcers encircling his right leg, complained to me on my morning round, on March 16th, of pain in the leg and of not feeling so well. On examination I found the ulcers had stopped discharging, and the whole foot and leg, to about three inches below the patella, were covered with an erysipelatous blush; his tongue was furred, bowels constipated, pulse 100, temperature 100·8°. He had had no vomiting, but a certain amount of shivering. The limb was painted all over, ulcers excepted, with white-lead paint. Within twenty minutes he said he had lost all pain and feeling of heat in the limb; and his temperature, taken carefully that night, was 98·4°. On March 18th the paint was chipping off, and the skin beneath was the normal colour.

CASE 2 gives a still more striking result. This was a boy, aged seventeen, who has been in the hospital three months, with a sinus in his leg, leading down to diseased bone, and whose ordinary temperature during the last few weeks had been 99°. On the morning of March 18th the leg and foot presented a well-marked erysipelatous redness. He had had rigors and vomiting. His temperature was 103·8°; pulse 110; bowels constipated. His leg was painted on the afternoon of the same day; in the evening he was perfectly easy. Temperature 102°, and on the following morning 99°. He said he felt quite as well as usual. He has had no relapse up to the time of writing.

The only internal treatment in both cases was at the time of painting ten grains of calomel and colocynth pill.

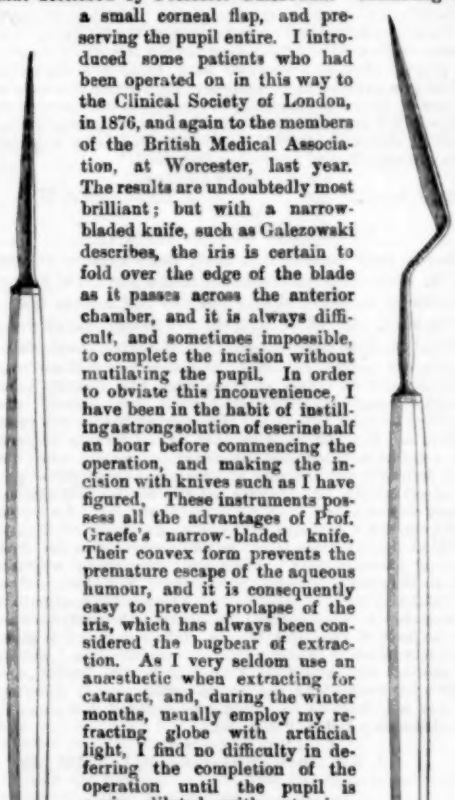
I remain, Sir, yours truly,

Bedford General Infirmary, March 26th, 1883. E. COLBY SHARPIN, Acting House-Surgeon.

A NEW OPERATION FOR CATARACT.

To the Editor of THE LANCET.

SIR,—I have frequently performed an operation similar to that described by Professor Galezowski—extracting by a small corneal flap, and preserving the pupil entire. I introduced some patients who had been operated on in this way to the Clinical Society of London, in 1876, and again to the members of the British Medical Association, at Worcester, last year. The results are undoubtedly most brilliant; but with a narrow-bladed knife, such as Galezowski describes, the iris is certain to fold over the edge of the blade as it passes across the anterior chamber, and it is always difficult, and sometimes impossible, to complete the incision without mutilating the pupil. In order to obviate this inconvenience, I have been in the habit of instilling a strong solution of eserine half an hour before commencing the operation, and making the incision with knives such as I have figured. These instruments possess all the advantages of Prof. Graefe's narrow-bladed knife. Their convex form prevents the premature escape of the aqueous humour, and it is consequently easy to prevent prolapse of the iris, which has always been considered the bugbear of extraction. As I very seldom use an anæsthetic when extracting for cataract, and, during the winter months, usually employ my refracting globe with artificial light, I find no difficulty in deferring the completion of the operation until the pupil is again dilated with atropine, which takes place in about half an hour. I may mention that in one hundred patients operated upon within the last few months, with and without iridectomy, I have had only two cases of suppuration of the globe. Both of these were double extractions, at one sitting, in very feeble persons, advanced in life. I am thankful to add that in each one eye was saved, and sight restored.



I am, Sir, your obedient servant,

CHARLES BELL TAYLOR, M.D., F.R.C.S.E., Surgeon to the Nottingham and Midland Eye Infirmary.

April, 1883.

P.S.—The bent blade enables the surgeon to use the right hand when operating upon the left eye. The knives have been made for me by Weiss, and are represented the exact size.

FOREIGN DEGREES AND THE BILL.

To the Editor of THE LANCET.

SIR,—The enormous issues involved in the passing of the new Medical Bill must be my excuse for troubling you again. Since my letter appeared in your last weeks' issue I have been inundated with letters from foreign graduates, calling upon me, as President of the Foreign Graduates' Association, to take some decided step in the matter. May I state, Sir, through your columns that the Lord President of the Council has been already communicated with, and has promised to give the matter his attention. It has been asked by some whether saving Clause 70 in Part VIII. does not protect foreign graduates from prosecution for using their properly acquired titles, but as I read it, Sir, this Clause will not affect foreign degrees at all; and if Part IV. 28 (?) remains part of the new Bill a gross injustice to foreign graduates must inevitably result. The matter might easily be set at rest, and a large body of honourable, and in many cases eminent, practitioners satisfied if such an additional saving clause as the following were inserted in Part VIII.: "Nothing in this Act shall prevent any person who, on December 31st, 1884, is a registered medical practitioner, from using and registering the title of a degree or diploma in medicine or surgery, or both combined, obtained after examination at a foreign or colonial university, providing that such degree or diploma had been obtained before the said date of December 31st, 1884."

I am, Sir, yours obediently,

Sheffield, April 2nd, 1883. H. J. HARDWICKE, M.D.

To the Editor of THE LANCET.

SIR,—In your issue of last week there appears a letter from Dr. Hardwicke relating to the future position of foreign graduates in medicine, should the new Bill become law as it now stands. As a M.D. Brussels, and doubly qualified and registered medical practitioner, I am, of course, deeply interested in the matter and really hope that you will use your great influence on behalf of those who, like myself, have, through circumstances entirely beyond our control, been compelled to take the M.D., after having been some years in practice. Most of us who have taken foreign degrees, have done so not because the examinations are easy, for this is certainly not the case at Brussels, as my fellow graduates can testify, but because all the British Universities in some way or other, such as requiring residence for a year or two, or the exact age of forty years, have effectually prevented practitioners in active and general practice from obtaining these degrees. Moreover, the reason why the M.D. in Belgium, Germany, Switzerland, and Holland does not confer the right to practise in the respective countries is not because the examination is defective, but merely because it is the law of the land that a state examination alone qualifies to practice. Taking this into consideration, together with the fact that American, French, Austrian, Italian, and Spanish degrees will be entitled to registration, I sincerely trust you will help us to obtain a recognition and place in the forthcoming Medical Register.

I am, Sir, yours truly,

J. REYNOLDS, M.D. Brussels, L.R.C.P., &c.

Coldharbour-lane, April 4th, 1883.

HOSPITAL ACCOMMODATION FOR THE ISOLATION OF THE SICK FROM ZYMOTIC DISEASES.

To the Editor of THE LANCET.

SIR,—The disappointing results of placebo legislation become every day more apparent, and it is greatly to be regretted that we have not more medical men of ability and experience in the House of Commons, although we must be thankful for the few who are already there. There are numerous social and sanitary questions constantly coming to the front which render authoritative medical testimony of the greatest importance. Such men as Dr. Andrew Clark and Dr. Richardson would be of inestimable value in the House. I believe by their eloquence and high professional standing they would at once command the ear of our legislators.

During the last thirteen years we have had several serious epidemics of scarlet fever in this town and neighbourhood, but there have been no means of isolation; consequently many young lives have been sacrificed which otherwise, humanly speaking, might have been saved. Dr. Angus Mackintosh, medical officer of health for our rural district, in his excellent annual report, just published, says: "Further legislation is absolutely necessary, and without it the labour of sanitary authorities and their officers will to some extent be unavailing, ineffectual, and useless. Legislation with respect to hospital accommodation for the isolation of the sick from zymotic diseases should be made compulsory. Generally speaking, Section 131 of the Public Health Act, 1875, has not been carried out, consequently the necessary accommodation has not been provided, and the want of it in a great many localities and districts where isolation cannot be otherwise secured is much felt. In the houses occupied by the labouring classes in this country the requisite convenience cannot be provided, and attempts to do so have invariably proved miserable failures. Isolation, in its proper meaning, must be such as to prevent atmospheric communication inside houses between the sick and the healthy, otherwise the particles of contagion and infection will float about apartments according to the currents, and be inhaled by the inhabitants."

Boards of guardians and sanitary authorities are often guilty of most unwise and injudicious parsimony. Keeping down the rates is, no doubt, important, but the saving of human life is infinitely more so. In this part of the country they have systematically refused to comply with the suggestions of the urban and rural medical officers of health, as far as regards building hospitals for the proper isolation of the sick from zymotic diseases.

I am, Sir, yours faithfully,

Chesterfield, March 19th, 1883. JOHN ROSE, M.D.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.

"THE LANCET'S" SANITARY REPORT ON SUNDERLAND.

YOUR report on the sanitary condition of Sunderland has been reported *in extenso* in the Sunderland and Newcastle papers, and, what is of more consequence, it is likely to produce good sanitary fruits, judging from the leaders and comments upon it. On all hands we hear that the "House of Recovery" is condemned, and must soon disappear, but at present it is in the possession of small-pox. The Sunderland *Daily Herald and Post*, which has long taken a clear and intelligent view of the backward sanitary condition of the place, and that against much opposition in the Town Council chamber, while acknowledging that the sanitary broom has been set briskly at work since your Commission was appointed, says that, at Sunderland, abuses die hard, and seem there to have "as many lives as a cat." It is felt that the authorities have sadly overweighted the painstaking and hard working medical officer of health, Mr. A. E. Harris, by placing upon him many extraneous duties; so that it may be said that they almost kill their medical officer on the principle, I suppose, *pour encourager les autres*. I hear that a meeting of the profession is likely to be held soon, to take the fever hospital matter, and other questions affecting the profession and health of the town, into consideration.

THE NEWCASTLE INFIRMARY.

I hear that important organic changes as regards the working of the infirmary are under the consideration of the governors, and I should not be surprised to see it thrown open as a free hospital before very long, with cases admitted on their merits, and the "letter" system abolished. At Sunderland the Infirmary has been worked on the free system for several years, to the satisfaction of the profession and patients, while that the public have taken a warmer interest in its free working is evinced by its improved financial position now as compared with its former state.

SCARLET FEVER AT MORPETH.

At a meeting held last week, the Mayor presiding, attention was called to the prevalence of scarlet fever in the town, and after a conference with the medical officer of health on the matter, it was resolved to recommend all teachers of public schools to keep them closed for another week.

FEVER AT MIDDLESBOROUGH.

At a late meeting of the Town Council at Middlesborough it was reported that the medical officer's statement was a gloomy one. There were twenty cases of fever in the hospital. Some typhoid cases which had come from Stockton were of a very malignant character. Four nurses who were stricken with fever were, upon the whole, progressing satisfactorily.

SOUTH SHIELDS BATHING.

The Shields folk are proverbially hardy "bodies;" a character one would think they are anxious to keep up when they turned out the other morning to witness, in the face of a keen south-easterly wind, a presentation to their swimming master, Mr. Pollard, on the South Pier, on his completion of his feat of bathing on 2000 consecutive mornings in the sea. He was accompanied in his dip, the report says, by eleven disciples, and they are said to have "enjoyed it." Well, after this, one feels that enjoyment must be a very relative expression, and one hopes it was not the feeling which the man described when he said, "his wife enjoyed very bad health."

Newcastle-on-Tyne, April 4th, 1883.

SCOTTISH NOTES.

(From our own Correspondent.)

MR. JOHN SIMPSON, L.R.C.S. Ed., Marykirk, has just been presented with a valuable testimonial by his many friends in the Mearns, where he has successfully carried on a large practice for over thirty years.

DR. REID, ELLOR, ABERDEENSHIRE.

I regret to record the sudden death of Dr. Reid, which occurred on the 26th March, from apoplexy. The deceased was an M.R.C.S. since 1839, graduated at Aberdeen in 1848, and has for forty years occupied an excellent social and professional position in Aberdeenshire. His son, Dr. James Reid, was recently appointed Resident Medical Attendant to Her Majesty the Queen, in succession to Dr. Marshall, who retired from ill health. Those who became acquainted with Dr. Marshall during the many years he occupied a position at Court will grieve to know that leisure has not brought to him an accession of strength.

AMBULANCE LECTURES.

Both the Rifle Companies and the Artillery at Aberdeen have recently been instructed in ambulance work by their inspectors, Surgeon-Majors Angus Fraser and Rodger. The courses have now been brought to a close, and from the manner in which questions were answered at the recent examination, it is evident that the men have been thoroughly taught, and have taken full advantage of the instruction offered. Surgeon-Major Rodger intends to resume his class.

GYMNASTIC TRAINING.

It is too late in the day for the necessity of proving the great advantages accruing from well-directed training in an organised gymnasium, but though they are fully admitted, there are many towns of some importance where this desirable aid to physical development and good health is not yet available. In such places a little enthusiasm and well-directed effort are usually sufficient to supply the deficiency, and judging from the report of a meeting in Perth last week neither of these factors is there wanting. A gentleman well known for his liberality and zeal seems to have taken the matter in hand, and conspicuous among his seconders are at least three of the members of our profession in the Fair City, so that it may be taken for granted that this local necessity will be soon met.

ONE-ROOMED HOUSES.

Since Mr. Bright's eloquent appeal on behalf of dwellers in one room the various newspapers of Scotland have been flooded with correspondence from visionaries and philanthropists who appear only now to have discovered the existence of a class which has excited the commiseration of health authorities ever since Public Health was looked upon as a science. One estimable man thinks the question has a direct bearing on Disestablishment; an amiable lady thinks the evil would be met by the opening of the churches on week days; and your contemporary the *Scotsman*, deprecating all cant on the subject, characterises it as a health problem, and points to practical channels of influence for the amelioration of the people's lot. A rigid sanitary supervision is advocated not only in the construction of workmen's dwellings, but in their maintenance; the physical injury resulting from insanitary conditions is shown, and the moral consequences which follow physical defects are insisted on. The free discussion of the matter will probably have greater influence for good than the free denunciation of war to which Mr. Bright treated the students at Glasgow.

PARIS.

(From our Paris Correspondent.)

THE Summer Session of the Faculty of Medicine began on March 16th, but the course of lectures was only opened yesterday, and is as follows:—Medical Natural History, Prof. Baillon; Physiology, Prof. Béclard (replaced *pro tem.* by Dr. Rémy); Surgical Pathology, Prof. Guyon; Medical Jurisprudence, Prof. Brouardel; Pharmacology, Prof. Regnault; Obstetrics, Prof. Pajot (replaced *pro tem.* by Dr. Budin); Experimental and Comparative Pathology, Prof. Vulpian; Medical Pathology, Prof. Péter; Hygiene, Prof. Bouchardat; Therapeutics, Prof. Hayem. Clinical Medicine: Prof. Germain Sée, Hôtel Dieu; Prof. Lasègue (since deceased), La Pitié Hospital; Prof. Hardy, La Charité Hospital; Prof. Potain, Necker Hospital; Prof. Ball, Mental Pathology at the Sainte-Anne Asylum; Prof. Parrot, Diseases of Children at the Enfants Assistés Asylum; Prof. Fournier, Syphilitic and Cutaneous Affections at the Saint-Louis Hospital; Prof. Charcot, Diseases of the Nervous System at Salpétrière. Clinical Surgery: Prof. Gosselin, La Charité Hospital; Prof. Richet, Hôtel Dieu; Prof. Verneuil, La Pitié Hospital; Prof. Trélat, Necker Hospital; Prof. Panas, Ophthalmology at the Hôtel Dieu; Prof. Depaul, Clinical Obstetrics at the Hôpital des Cliniques.

New inventions generally produce new diseases, and so, since the introduction of subcutaneous injection of narcotics, morphiomania has become much more prevalent than is generally supposed. This fact has recently been brought to the notice of the Société de Thérapeutique by Drs. Dally and Moutard-Martin. The latter gentleman related a case in which a young girl, eighteen years of age, and hysterical, was in the habit of injecting herself with morphia twenty or thirty times a day, to the extent of 30 centigrammes, or 4½ grains in the twenty-four hours. Dr. Moutard-Martin, however, succeeded in curing the patient of this unfortunate habit, and consequently of the newly engendered malady, by enjoining her to reduce the number of injections gradually; and she has now, after three years of conscientious perseverance, been able to discontinue them altogether. At the same meeting, Dr. Dujardin-Beaumetz stated that he frequently had occasion to observe the evil effects on hysterical patients of the subcutaneous injections of morphia, without producing any beneficial results beyond the temporary relief of pain, real or imaginary, afforded by them. Dr. Dujardin-Beaumetz pointed out other risks attending these subcutaneous injections, not the least of which are abscesses produced not only at the seat of the injection, but in other parts of the surface of the body. On opening these abscesses the pus issuing from them has a gangrenous odour and aspect. This tendency to suppuration manifests itself when, the elimination of the morphia becoming insufficient or defective, the first symptoms of intoxication make their appearance.

An Insectological Exhibition is to be held in Paris in July next, at the Palais de l'Industrie, where will be exposed useful and destructive insects, from the honey-making bee to the terrible phylloxera, so ruinous to the vine. Lectures on insectology and agriculture will also be open to the public during the whole time of the exhibition, and particular attention will be devoted to the natural history of the phylloxera, the means for its destruction, and to the development of sericulture.

Paris, April 3rd, 1883.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for efficient vaccination in their respective districts:—Dr. Lionel A. Weatherly, Portishead, Somerset (third time).—Dr. Dearden, of Church, (fifth time).

MEDICAL NOTES IN PARLIAMENT.

The Medical Act Amendment Bill.

IN the House of Lords on Thursday, petitions were presented in favour of this Bill by Lord Carlingford, and against it by the Duke of Richmond and Earl Cairns. In moving the second reading, Lord Carlingford said the object of this Bill had been before the country for a long time, and it was now ripe for settlement by legislation. Attempts had previously been made to settle it, and the House of Lords had passed several Bills on the subject, which had for various reasons failed to pass the other House, the chief reason being the question of the direct representation of the medical profession in general upon the Medical Council. He had this advantage over his predecessors who had dealt with this subject, in having the report of the Royal Commission which was appointed by the present Government, and whose recommendations were incorporated in this Bill. He would not name all the members of the Commission, but one of them was the late Sir George Jessel, who had joined in all the recommendations that had been arrived at. The Bill was a very extensive and complete measure. Now, as heretofore, the great evil to be dealt with by legislation lay in the fact of the multiplicity, variety, uncertainty, and insufficiency of the medical licences, which placed a man on the Medical Register, with all the rights of practising as a medical man; in the want of that security, which the public had a right to possess, that every man so admitted to the Register should be ascertained to be competent before he obtained the legal right of dealing as a medical man with human lives and limbs. The only plan of dealing with this difficulty, both the present and the late Government and the Royal Commission considered, lay in the plan of constituting in each of the three divisions of the United Kingdom a board consisting of members derived from the present licensing bodies, which board alone should have the right of testing and certifying the competence of those who were to obtain the legal right to practise in medicine and surgery. The Bill provided that any person, male or female, passing the final examination provided by the Bill, and no other persons, with certain exceptions, would be entitled to be placed on the Register. It constituted a medical board in each part of the United Kingdom, representing all the bodies now capable of giving degrees or diplomas and admitting to the Register. The number of these bodies might be increased or diminished from time to time by the Privy Council on the motion of the Medical Council. Each of these medical boards should frame schemes, not only for the final examinations, but also for the previous qualifications and training of the candidates both in general and in professional knowledge; and these schemes would come into effect when they had received the approval of the Medical Council and of the Privy Council. The Bill aimed at securing uniformity of standards and conditions in the three countries. The words of the Bill were not so clear as they might be, but he should take care that the three Medical Boards under the superintendence of the central body of the Medical Council should, as far as possible, be uniform in their arrangements. The Bill proposed to enlarge and improve the constitution of these Medical Boards, and to lessen their numbers. The Medical Council would consist of six Crown nominees, eight members chosen by the Medical Boards of the three parts of the United Kingdom, and four members elected by the general body of medical practitioners throughout the country. The Medical Council would be renewed every five years and its duties would be to inquire into the efficiency of the examinations conducted by Medical Boards, and to exercise superintendence over them. The Medical Boards of each division would be required not only to conduct the final examinations, but to see that there had been a sufficient previous training pursued by the candidate. The next part of the Bill dealt with colonial and foreign practitioners, and the Government hoped, by enabling the Medical Council at its discretion to recognise any sufficient colonial or foreign qualification as a title to practise in this country, that a more favourable reciprocity would be secured for British medical men abroad. Provision was made for the purpose of preventing the fraudulent and deceptive use of medical designations. It was hoped that the Bill would make the central body—the Medical Council—a more important and useful body than it had ever yet been. One change in its constitution that would be effected was the admission in a moderate form of the direct representation of the whole body of medical practitioners of the country. This change was proposed in deference to the very generally expressed feeling of the profession. Another proposed change was that members of the Council derived from medical licensing authorities should not be directly chosen one by one by each of those bodies, but should be chosen by the Medical Boards of each division of the United Kingdom. The Scotch universities were grouped together for the purpose of representation on the Medical Council, and this had been found to be a very inconvenient practice. Coming then to the medical boards, or conjoint boards, the only difficulty was the proportionate numbers of representatives of the different medical authorities on these boards. Representations had been made to him which had convinced him that the proposals in the Bill were not entirely satisfactory, and he would be prepared to make some alterations on this point in committee. The representations of the Irish universities had had great weight with him on this point. As to the functions of the boards, which were of the essence of the Bill, no doubt they were asking Scotland and Ireland to make a sacrifice in coming into a conjoint board. But it would be impossible to make any exception, and for the sake of the general good it was necessary to ask those distinguished bodies to give up some of their ancient privileges. Another point was the affiliation of the gentlemen who passed under the new scheme to the various medical bodies. There was no provision for the compulsory affiliation of licensees in the previous Bills that passed this House. But the Royal Commission thought young men would find it advantageous to attach themselves to some body, and upon that opinion the Bill was framed. The point was one of difficulty, and was not essential to the spirit of the Bill; he would be willing to consider any representations on the matter. Without entering into more of the many details of the Bill, he would urge that it was time the question was settled. Four years ago the Medical Council passed a resolution that the continued uncertainty of legislation on this subject retarded the progress of medical education, and was contrary to the interests of the profession and the public. This Bill was intended to remedy that state of things, and he had much confidence in moving the second reading. He would allow a considerable period to elapse before putting down the committee stage of the Bill.

The Earl of Aberdeen thought sufficient time had not been given for an expression of opinion on this Bill to have come from Scotland, and therefore he was glad the Committee was to be postponed for some time. He had received a telegram from the Principal of Aberdeen University, in which he stated his conviction, and said the feeling was unanimous on the part of the governing body, that very considerable amendments were desirable in this measure before it became law. He saw difficulties in the examination provided under the Bill including a clinical examination, which he thought would make too great a demand upon examiners, students, and patients.

The Earl of Milltown said the College of Surgeons in Ireland felt it was very desirable that there should be uniformity in the education, in the curriculum, in the final examination, and in the fees. In respect to affiliation, no doubt it was desirable there should be a controlling power; but it must be remembered that if the power of granting degrees were taken away from the Colleges, the income from fees would be greatly reduced. Another point was that of registration, for the Bill proposed to require a fee from the existing medical men for permission to remain on the Register. The Bill proposed to admit laymen on the Medical Boards, and this would require careful consideration. The Apothecaries' Hall, being simply a trading company, should not be represented on the Board. He feared this Bill would deteriorate the quality of medical education. At present it was a remarkable and satisfactory fact that in Ireland and Scotland, of those who were on the Medical Registers as entitled to practise during the last nine years something between 40 and 50 per cent. took their place from University qualifications alone. It appeared that there had been an oversight in the Bill with regard to University representation on the Irish Medical Council, inasmuch as only four representatives were given to Irish Universities out of a total of eleven, as compared with eight given to England and Scotland. He trusted the Government would see their way to withdraw the Bill.

Viscount Cranbrook considered one portion of the Bill was wrong in principle. He referred to the provision imposing a penalty of £10 for using a foreign degree in this

country, although licensed by the Royal College of Surgeons.

Lord Balfour of Burleigh wished to remind their lordships of the way in which this Bill would affect Scotch universities. The fame of Scotch medical schools was known all over the world, and the importance of the interests involved was evident from the fact there were at this moment nearly three thousand students undergoing a course of study in medicine in Scotland. In the Scotch medical schools no one who took a degree in surgery or medicine could quality himself without undergoing a satisfactory examination in other branches of science. It was obviously a very different thing for English universities that granted medical degrees to about fifty students in a year to be required to make concessions. No doubt the interests of Scotch universities were guarded by the constitution of the Medical Board, but the Medical Board was by no means supreme: it was tied hand and foot to the Medical Council.

Lord Camperdown said this Bill was another, and he hoped it would be a successful, attempt to deal with a complicated question. The imperfections of the present system of medical licensing were universally recognised, and were recognised not the least by the medical authorities. It was perfectly impossible to leave the question alone, and that was because of the new universities which were coming into existence, and which would be sure to claim the privilege not only of the granting of licences, but of representation on the Medical Council. He approved of the power of the Bill to restrict the number of licensing authorities, and of the principle of one sole licensing authority—namely, a Medical Council, with three divisions in the kingdom, of a Medical Board which should be composed of representatives of those institutions which were approved by the Medical Council and Privy Council. The creation of this Council was a step which had been approved over and over again by England and Wales, and on one occasion by the Scotch authorities. This Bill proposed for the first time a change in the constitution of the Medical Council, which, he believed, would work well for the medical profession. And this important change was the introduction to the Medical Council of members representing the general body of the medical profession. The question of the proportionate representation of the universities and corporations on the Board was one that was to be dealt with and which required revision; and although the noble baronet (Lord Balfour) had complained of any interference with the Scotch Universities in this respect, yet he wished to point out that the matter could not be dealt with in respect to England and Ireland alone, and that Scotland was not being asked to make any concessions that England and Ireland did not share in. He further approved of the affiliation of titles proposed. He thought the registration of the high and honourable title of the Royal College of Surgeons of England, however, should be permitted. The enjoyment of degrees now possessed would not be interfered with, those rights being protected by Clause 23 of the Bill.

Lord Carlingford assured the noble lord opposite (Lord Balfour) that there was no foundation for the fear he had expressed with regard to the partiality of the proposed Medical Council; and with regard to the protection of medical titles now enjoyed, the Bill would not declare illegal any title enjoyed at the time of its passing.

The Bill was then read a second time, and the Committee stage was fixed for that day fortnight.

In the House of Commons on Friday, March 30th, a petition in favour of the Infectious Diseases Notification Bill was presented from Westminster.

Mr. Herbert Gladstone gave notice that he will move for leave to reintroduce his Bill of last session dealing with the superannuation of union officers in Ireland.

Mr. Trevelyan replied to Mr. O'Brien on Monday that the Irish Local Government Board had made inquiry into a reported outbreak of scarlet fever and diphtheria in county Donegal, and found that the prevalent affections were not contagious, but were mainly bronchitis and pneumonia. Poor-law relief had been offered in all cases where it was entitled to be given.

On Tuesday, Mr. Hopwood gave notice that on May 1st he will call attention to the compulsory clauses of the Vaccination Acts, and move a resolution.—Sir J. Pease's annual motion in favour of the abolition of the opium trade with China was disposed of by the "previous question," after about two hours' debate. Amongst the speakers was Dr. Farquharson, who protested against extravagant ideas of the evils of opium-smoking, which he regarded as beneficial under certain circumstances.

Vivisection.

On Wednesday, Mr. Reid's Bill for the Abolition of Vivisection occupied about four hours of the sitting, and was then "talked out." The rejection of the Bill was moved by Mr. Cartwright, and in seconding the motion Dr. Lyon Playfair gave the practical view of vivisection, showed how small was the actual percentage of experiments upon animals in a conscious state, and contended with much force that man's first duty in this matter was to man, and afterwards to the lower animals. Sir William Harcourt deprecated interference with the present law on the subject, and remarked that there were only twenty-six persons in the country who practised vivisection. The hour of adjournment arrived as Sir J. M'Kenna was speaking against Mr. Reid's motion.

On Thursday, in reply to Sir H. Peek, Mr. Chamberlain said two further cases of typhoid fever had occurred amongst the emigrants who waited at the depôt at Plymouth for the refitting of the ship *Oxford*. The outbreak was not due to overcrowding, but the whole of the emigrants had now left the depôt.

THE SECOND READING OF THE MEDICAL BILL.

THE Bill, as will be seen by our report, has passed the second reading in their Lordships' House. This result will be hailed with satisfaction by the great bulk of the profession. The measure has, of course, yet to encounter the perils incident to its passage through Committee, and more or less opposition and hostile criticism in the Lower House. But the lucid exposition of its object and provisions by Lord Carlingford cannot but carry conviction to every unprejudiced mind that there are great grievances requiring removal in medical education and examinations and in the mode of granting qualifications, and that the means proposed to that end by the Bill are in the main sound and judicious.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

Thomas C. Gilchrist, Edmund T. Milner, Frederick C. Bury, Robert B. Wild, Robert Richards, Patrick Lennon, Reuben Barnett, John H. Thompson, F. H. W. Cottam, William H. Henshaw, Charles A. Craston, and Arnold Sidebotham, Owens College, Manchester; Sidney Barwise, F. W. Emery, Charles D. Fitch, William B. Featherstone, and Alfred W. Hill, Birmingham; William Balgent, Newcastle-on-Tyne; Herbert J. Pocock, Alfred R. Aubrey, and Lionel H. Williams, Bristol; Hugh H. Graham, Toronto; J. M'Gaw Woodbury, New York; N. B. Gandevia, Bombay; Ernest Humphry, St. Bartholomew's Hospital; Ashton Street, Herbert Herbert, and Joseph Ellison, Leeds; Thomas J. Jones and Arthur F. Davenport, Edinburgh; F. J. Knowles, Liverpool; C. E. Sander, University College; Arnold C. Ingle, Edward Thornton, and Ernest H. R. Watts, Cambridge; John Straughan and Frederick Proud, Newcastle-on-Tyne; Edward Buxton, Liverpool; Alfred J. Tomkins, Bristol; Sidney H. Harrison, Birmingham; Arthur H. Smith, Gerald W. Adams, Alfred A. Mumford, James Walls, Frank Nuttall, Chas. E. Hollings, Geo. H. Russell, and Thomas Martland, Owens College; Henry T. Platt and Robert Crosby, Newcastle-on-Tyne; Joseph J. Lister, Charles Yeoman, and Henry S. Mandsley, Cambridge; Frank Postlethwaite, St. Bartholomew's Hospital; Claude P. K. Hemming and Henry Tonks, London Hospital; Thos. H. Goodman, Charing-cross Hospital; George Rowell, Guy's Hospital; John L. Jeaffreson, St. Bartholomew's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on March 29th:—

Berkley, Ernest James Gibson, Terrace-road, Hackney.
Davy, Thomas George, Milman-street.
Floyer, Frederick Anthony, St. Thomas's Hospital.
Knight, Edward, Riverdale, Leatherhead.
Mitchell, Walter Frederick, St. Bartholomew's Hospital.
Vann, Alfred Mason, Grove House, Durham.

The following gentleman also on the same day passed the Primary Professional Examination:—

Williams, Geo. Forbes Crawford, St. Thomas's Hospital.

MR. JOSIAH OLIVER, M.R.C.P. Ed., has been placed on the Commission of the Peace for the borough of Maidstone.

ACCORDING to the "Port Elizabeth Telegraph," small-pox has now disappeared from that part of the colony. Not a single case originated in Port Elizabeth; and of the seven patients who were admitted into the lazaretto, two came from Cape Town, one from Uitenhage, and the others from Hendricks' Kraal. Of these patients three had been vaccinated, and all recovered; but of the four who were unvaccinated only one recovered. None of the attendants contracted the disease.

STEWART INSTITUTION FOR IMBECILE CHILDREN.—It is gratifying to learn that the annual subscriptions to the funds of this charity have gradually increased, the sum obtained last year amounting to £907. As the institution is the only one of its kind in Ireland, it certainly ought to be more liberally supported by the provinces than it is at present, more particularly as inmates are admitted from all parts of the country, and also because, during the last ten years, the number of idiots in Ireland has increased from 1 in 1000 to 1 in 600.

PRESENTATIONS.—Mr. George Farrer, M.R.C.S., of Brighouse, has been presented with a valuable oak escritoire, with silver plate mounts and fittings, "as a memento of his kindness in giving the lectures" to the women's class of the Brighouse centre of the St. John Ambulance Association.——Dr. E. T. Blakeney, who has been recently appointed to the Boyle No. 1 Dispensary, has been presented by the people of Croghan with an address and gold watch and chain, as a token of their appreciation of his professional services, and regret at his departure.

DONATIONS AND BEQUESTS TO MEDICAL CHARITIES. Mr. G. H. Strutt, of Belper, has given £1000 towards the Derby Children's Hospital Endowment Fund, and in addition has promised to contribute £50 for the next three years.—Miss Caroline Hutton, late of Lincoln, bequeathed £200 to the Samaritan Free Hospital.—Mrs. Elizabeth Knox has left £200 to the Meath Hospital, Dublin.—Messrs. Guinness have given £120 to Steevens's Hospital, Dublin.—Mr. F. Kinahan has given £25 to the Belfast Ophthalmic Institution.

THE HOME FOR INCURABLE CHILDREN.—The annual meeting of the friends of this home, in Maida Vale, was held on the 31st ult. The total receipts during 1882 amounted to £808 11*s.* 9*d.* Several speakers pointed out the claims which the charity had upon the benevolence of the public, since it made provision for helpless children whose parents were unable to bear the burden which the helplessness of their offspring entailed. It was announced that the Duke of Connaught had given a second donation.

UNIVERSITY COLLEGE HOSPITAL.—At the recent annual meeting of the governors of this hospital, it was stated that during the past year 2577 patients had been admitted to the wards, in addition to 159 who occupied beds at the beginning of the year, making in all 2736 in-patients; while there were 19,895 out-patients treated, making in all 22,651 patients who had received the benefits of the institution in the twelve months. The expenditure on each occupied bed had, during the last six years, been reduced from £92 to £71 per annum; notwithstanding this reduction, however, there was a large deficiency, and the year closed with a debt of £8000. Hopes were expressed that the subscription list might be increased. The contributions of the patients amounted to £360.

BRISTOL ROYAL INFIRMARY.—The annual board meeting of the trustees of this institution was held on the 27th ult. The report presented by the committee was the most satisfactory one made for many years, the expenditure having during the past year exceeded the income by only £236 12*s.* 1*d.*, whereas at the end of 1881 a debt of £2500 was left as the result of that year's transactions. The annual subscriptions have increased by £262 16*s.* The collections at places of worship are the largest on record, and the workmen's donations exceeded those of 1881 by £1·0. In consequence of the General Hospital being closed for four months, there had been considerable pressure on the resources of the infirmary, which was further increased by the large number of typhoid cases received during the year. The average number of days of each patient remaining in the house had fallen from 31·03 to 25·27.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANDREWS, ARCHIBALD G., M.R.C.S., has been appointed Resident Accoucheur to the London Hospital.

ASHWELL, HERBERT G., M.R.C.S., has been appointed House-Surgeon to the Great Northern Hospital, Caledonian-road, N., vice J. Neil Cook, resigned.

ASLETT, G. S., M.R.C.S., L.S.A.Lond., L.R.C.P.Edin., has been appointed Resident Medical Officer to the Newark-upon-Trent Hospital and Dispensary, vice W. Beevor, M.B., resigned.

BERRYMAN, W. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the State Line of steamers sailing to America.

BOREHAM, FRANK SQUIRE, L.R.C.P., L.R.C.S.I., L.S.A.Lond., has been appointed Medical Officer to the Budworth District of the Runcorn Union.

ELLIOT, HENRY F., M.R.C.P.E., F.R.C.S.E., &c., has been appointed Surgeon to the Infant Orphan Asylum, Wanstead, vice W. Scott, M.B., resigned.

GALLOWAY, PETER, M.B., C.M.Aber., has been appointed Medical Officer to Auchindoir and surrounding parishes.

GARSTANG, T. W. HARROP, M.R.C.S., L.S.A.Lond., has been appointed District Medical Officer to the Saddleworth Township.

HAILEY, COLLISON, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health to the Newport-Pagnell Rural Sanitary District.

HAYDEN, WM. GALLIMORE, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer to the Twelfth District and Workhouse of the Wycombe Union.

HAYMAN, HENRY, F.R.C.S.Eng., L.S.A.Lond., has been reappointed Medical Officer and Public Vaccinator to the Tenth and Eleventh Districts of the Wycombe Union.

HENSON, S. ROSSELL, M.R.C.S., L.M., L.S.A.Lond., has been appointed Medical Officer to the Hull Workhouse, vice A. Macmillan, M.D., resigned.

HITCHCOCK, CHARLES KNIGHT, M.D., M.A.Cantab., has been appointed Medical Superintendent to the Lunatic Hospital, Bootham, York.

HOOLE, HENRY, M.B.Lond., has been appointed Medical Officer to the Stock Exchange Clerks' Provident Fund.

IBBETSON, GEO. AUGUSTUS, F.R.C.S.Eng., L.D.S., has been appointed Consulting Dental Surgeon to University College Hospital.

LEE, HERBERT GROVE, M.D. St. And., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer to the Ninth District of the Wycombe Union.

MCCREERY, JAMES OSTERLY, L.R.C.P.Ed., L.R.C.S.I., L.A.H.Dub., has been reappointed Medical Officer to the Little Missenden District of the Wycombe Union.

MACKINTOSH, ANGUS, M.D., L.F.P.S.Glas., has been reappointed Medical Officer of Health for the Chesterfield Rural Sanitary District; also to the Brampton and Walton, the Whittington, the Newbold-cum-Dunstan, the Clay-lane, and the Dronfield Urban Sanitary Districts.

OAKLEY, ADAM R. H., L.R.C.P.Ed., has been appointed House-Surgeon and Secretary to the General Infirmary, Hertford, vice Damer Priest, resigned.

O'CONNOR, FREDERICK, L.K.Q.C.P., L.R.C.S.I., has been appointed Medical Officer to the Second District of the North Witchford Union.

ROGERS, E. COULTON, M.R.C.S., L.S.A.Lond., has been appointed Medical Superintendent to the County Lunatic Asylum, Fulbourn, Cambs., vice Bacon, deceased.

RUCKLEY, H. ROBINSON, L.R.C.P.Ed., L.R.C.S.I., has been reappointed Medical Officer and Public Vaccinator to the Third District of the Wycombe Union.

SCOTT, E. SAMUELL, M.B., C.M.Ed., has been appointed a Medical Officer to the Shrewsbury Dispensary, vice Edward Cureton, L.R.C.P., resigned.

SEARANCKE, NICOLL FREDERICK, M.R.C.S., has been appointed Medical Officer to the Third District of the Westbury-on-Severn Union.

SPENCER, HENRY B., M.D., has been appointed Surgeon to Her Majesty's Prison at Oxford, vice Mr. Horatio Symonds, resigned.

TURNER, FRED. HARRY, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer to the Second District of the Wycombe Union.

WILLIAMS, E. R., M.R.C.S., L.R.C.P.Lond., has been appointed Junior House-Surgeon to the Stanley Hospital, Liverpool, vice F. W. Pilkington, M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 2nd inst., at 184, Aldersgate-street, E.C., the wife of John Adams, L.R.C.P.Lond., of a son.

BELLINGHAM.—On the 22nd ult., the wife of Joseph Bellingham, of Dudley, of a daughter, stillborn.

HOPKINS.—On the 28th ult., at Rhydian, Suffolk, the wife of Brigade Surgeon Nathaniel Hopkins, of a son (Rees).

MASTERS.—On the 1st inst., at Stafford House, Hednesford, the wife of J. Alfred Masters, L.R.C.P.Lond., M.R.C.S. Eng., of a son.

PARKINSON.—On the 1st inst., at Fairlynch, Matheson-road, West Kensington, the wife of George William Parkinson, M.R.C.S., L.D.S.Eng., of a daughter.

PLATT.—On the 30th ult., at Upton-villas, Kilburn, the wife of William H. Platt, L.R.C.P., of a son.

POWELL.—On the 29th ult., at Elm Cottage, Beckenham, the wife of H. A. Powell, M.A.Oxon., M.R.C.S. Eng., &c., of a daughter.

RYAN.—On the 26th ult., at Emly, Tipperary, the wife of Charles E. Ryan, M.D., of a daughter.

SOMERVILLE.—On the 29th ult., at Chesterfield, Derbyshire, the wife of John R. Somerville, M.D., F.R.C.S.Ed., of a son.

WALLACE.—On the 30th ult., at 96, Cazenove-road, Upper Clapton, the wife of Frederick Wallace, L.R.C.P.Lond., prematurely, of a daughter, stillborn.

WEIR.—On the 31st ult., at Connaught House, Norwood, S.E., the wife of Walter Weir, M.S., F.R.C.P.Ed., of a son.

MARRIAGES.

BOTT—WOLSTENHOLME.—On the 29th ult., at St. Andrew's Church, Wells-street, by the Rev. W. Greenwood, B.A., William Gibson Bott, L.R.C.P., M.R.C.S. Eng., of 61, Kennington-park-road, to Camilla Anne Kirkman, widow of Thomas Wolstenholme, of Kennington. No cards.

COMBE—MARSHALL.—On the 28th ult., at St. Stephen's, Westbourne-park, W., by the Rev. Arthur Marshall, Rector of Heythrop, Oxon., brother of the bride, assisted by the Rev. Marshall Tweddell, Vicar of St. Saviour's, Paddington, W., Frederick Orloff Combe, M.B., C.M.Edin., third son of the late James Combe, Esq., of St. Elmo, Torquay, Devon, to Emily Arabella, younger daughter of William Marshall, Esq., of Kildare-terrace, Bayswater, formerly of Greestone-place, Lincoln.

EWART—MILLAR.—On the 2nd inst., at St. Jude's Church, Southsea, by the Rev. —Tomkins, John Henry Ewart, M.R.C.S., L.R.C.P.Lond., of Manchester, to Mary Isabella, eldest daughter of Major-General J. C. Millar, B.S.C., of Wilson-grove, Southsea.

GAWITH—LEETHAM.—On the 28th ult., at St. Mary Abbotts, Kensington, by the Rev. W. E. Haigh, James Jackson Gawith, M.R.C.S., of 23, Westbourne-park-terrace, to Selina Turner, widow of Walter Leetham, Esq., and elder daughter of A. W. H. Pryna, Esq., of Hull. No cards.

NINNIS—SUTTON.—On the 28th ult., at the Parish Church, Streatham, Belgrave Ninnis, M.D., Fleet Surgeon, Royal Navy, to Ada Jane, elder daughter of the late James Sutton, Esq., of Pembroke House, Streatham.

VLIELAND—MILLEN.—On the 28th ult., at Ospringe Church, Faversham, Charles James Vlieland, M.R.C.S., of St. Thomas's, Exeter, to Alice Edith, elder daughter of W. Millen, of Syndale Valley, Faversham.

WAGHORN—BLENCOWE.—On the 29th ult., at St. Peter's, Brackley, Henry Waghorn, Surgeon-Major, Army Medical Department, to Matilda, third daughter of William Blencowe, of St. James's, Brackley.

DEATHS.

ADAMS.—On the 3rd inst., of 184, Aldersgate-street, E.C., Frank, the infant son of John and Ellen Adams.

BANNISTER.—On the 27th ult., suddenly, at his residence, Dudley House, Deal, Kent, Henry Powell Bannister, M.R.C.S., &c., late of Vauxhall-bridge-road, S.W., aged 57.

BELLINGHAM.—On the 28th ult., the wife of Joseph Bellingham, of Dudley, of syncope.

DAVIDSON.—On the 31st ult., at Cheltenham, A. Davidson, M.D., Inspector-General of Hospitals, late Bengal Medical Service, in his 86th year.

FULLER.—On the 30th ult., at Brighton, Thomas Warberton Fuller, M.B., eldest son of Thomas Fuller, M.D., of New Shoreham, aged 27.

GRESSWELL.—On the 13th ult., at his residence, Louth, Lincolnshire, Dan Gresswell, F.R.C.V.S., late Examiner for the Royal College of Veterinary Surgeons. Friends will kindly accept this intimation.

GULLY.—On the 27th ult., Jas. Manby Gully, M.D., aged 75.

AINWORTH.—On the 29th ult., at Queen's-road, Edmonton, John Hainworth, F.R.C.S.Eng., L.S.A.Lond. (late of Camden-road, N.W.), aged 79.

MANBY.—On the 1st inst., at Wolverhampton, Herbert Lynsey Manby, Surgeon, of Brewood, Staffordshire, in his 28th year.

MOUTRAY.—On the 28th ult., at Ashburnham, Shacklewell-green, Dalston, Charles Drummond Moutray, M.B.T.C.D., aged 32.

EAME.—On the 3rd inst., at his residence, Birchington-on-Sea, after a long and painful illness, borne with great patience and Christian fortitude, Thomas Albert Neame, M.R.C.S., third son of the late James Neame, Esq., in his 47th year. Deeply regretted.

WEN.—On the 28th ult., at his residence, The Brook Villa, Liverpool, Harold Owen, L.R.C.P., M.R.C.S., aged 60.

PEYTON.—At Roscommon, H. R. Peyton, L.R.C.S.I., L.M.K.Q.C.P., for thirty-five years Surgeon to the Roscommon County Infirmary.

QUARTLEY.—On the 28th ult., at Lancaster-road North, Finsbury-park, Francis Cecil Quartley, M.R.C.S., son of the late Rev. Henry Reade Quartley, Vicar of Wolverton, Bucks, aged 35.

REID.—On the 26th ult., somewhat suddenly, at Ellon, James Reid, M.D.

RUSSELL.—On the 30th ult., at The Terrace, Gravesend, George Ireland Russell, M.D., F.R.C.S., in his 86th year.

SWAIN.—On the 24th ult., at Penlee Cottage, Stoke, Devonport, Paul William Swain, F.R.C.S., J.P., aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, April 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—Dr. Cullimore, "On the Use of the Moxa in Chronic Affections of the Spinal Cord."—Dr. Gilbart Smith, "On Two Cases of Pancreatic Disease."—Dr. de Watteville will show a New Method of Producing Light for Medical Purposes.

Tuesday, April 10.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Professor McKendrick, "On Physiological Discovery."

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. J. G. Garson, "On the Osteology of the Ancient Inhabitants of the Orkney Islands."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Arthur Barker, "On Nævus of the Rectum proving Fatal in an Adult from Hæmorrhage."—Mr. Harrison Cripps, "On some Points connected with Local Recurrence of Malignant Diseases."

Wednesday, April 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—7.30 P.M. Council.—8.0 P.M. The President (Mr. Rivington), "On a Case of Removal of Loose Cartilage from Knee-joint."—Dr. J. Herbert Stowers, "On Observations upon the Nature and Treatment of Infantile Eczema."

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. M. Morris and Mr. G. C. Henderson, "On the Life History of the Ringworm Fungus (Trichophyton Tonsurans)."—Mr. C. G. Matthews, "Notes on the Red Mould of Barley."

Thursday, April 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Dr. Waldstein, "On the Art of Pheidias."

Friday, April 13.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—8 P.M. Dr. Waldstein, "On the Influence of Athletic Games on Greek Art."

CLINICAL SOCIETY OF LONDON.—Dr. Semon, "On Removal by internal operation of a Pin from the Larynx, in which it had been impacted for thirteen months, and had caused Anchylosis of the Left Crico-Arytenoid Articulation."—Dr. Whipham, "On Two Cases of Enteric Fever, accompanied by an Erythematous Eruption, resembling that of Scarlatina."—Mr. B. Roth, "On a Case of Lateral Curvature of the Spine, illustrating its treatment without the use of mechanical supports."—Mr. Page, "On a Case of Tabetic Arthropathy in which the Tarsal Bones of both Feet were involved."—Mr. Barker will exhibit a Case of Subperiosteal Amputation at the Hip-joint.

Saturday, April 14.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. A. Geikie, "On Geographical Evolution."

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 5th, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 5.30 A.M.
Mar. 30	29·46	S.W.	47	45	..	53	39	..	Raining
,, 31	29·93	W.	41	39	..	57	33	·07	Hazy
Apl. 1	30·25	W.	52	46	..	56	34	..	Hazy
,, 2	30·15	E.	41	39	..	63	33	..	Hazy
,, 3	30·20	W.	50	46	..	66	36	..	Foggy
,, 4	30·24	N.W.	54	51	..	65	44	..	Hazy
,, 5	30·25	W.	51	47	..	..	41	..	Fine

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

NOTICE TO SUBSCRIBERS.

THE Publisher regrets that the greatly enlarged size of THE LANCET last week caused an interference with its usual prompt transmission through the post, whereby delay in many cases unavoidably occurred in the delivery of copies. Subscribers who suffered disappointment on this account will please accept this explanation.

THE INFLUENCE OF ELECTRIC LIGHT ON THE EYESIGHT.

THE above subject has been occupying attention in one of the district medical societies at Vienna. Dr. Kraus, at a recent meeting, brought forward the question whether the introduction of electric light into schools, dwelling houses, and public buildings was liable to any objections from a sanitary point of view. During the discussion which ensued, Professor Mauthner gave an interesting summary of the subject, from which it would seem that there exists but little practical evidence on the question at issue. The press has expressed a hope that the suggestion made in Vienna will be taken up in other European capitals, with a view of the matter being inquired into by medical societies. The statements made on the occasion referred to tended to prove that theoretically there is no objection to be urged by the profession against the electric light, except when in such an intermittent form as to cause discomfort to those in the vicinity of the lamps.

SCHEDULE E AND UNION SALARIES.

To the Editor of THE LANCET.

SIR,—Income Tax is an abomination in whatever form it is levied, but this particular portion on incomes earned out of parish appointments is iniquitous. Everyone knows how these appointments are paid. If the expenses were cast up and set against the salary, the balance would be *nil* in most cases. I should not have troubled you had not a brother practitioner holding an appointment told me that he always disregarded the Schedule E, having always returned under Schedule D his full income, and paid on that only. I should like to know if there are others who do the same. This particular portion of the tax on incomes bears heavily upon us, and ought to be relaxed, especially considering the low salary attaching to the services rendered; and, again, that the appointment is recognised by no Government annuity hereafter for long services, nor any present acknowledgment as public servants attending upon Her Majesty's poor subjects, albeit only paupers.

I am, Sir, yours faithfully,

April 4th, 1883. PARISH DOCTOR.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Board of Examiners of the Royal College of Surgeons, on the 30th ult., 223 candidates presented themselves, against 232 for the corresponding period of last year. The following were the questions on Anatomy, the candidates being required to answer four, and not more than that number, out of the six questions, from 1 to 3 o'clock:—

1. Describe the dissection by which you would expose the genio-hyo-glossus muscle.
2. Describe the os magnum.
3. Describe the course, relations, and tributaries of the innominate veins.
4. Give the dissection required to expose the tendon of the peroneus longus in the sole of the foot.
5. Enumerate in their relative positions the muscles which are in contact with the capsular ligament of the hip-joint. Name those muscles which rotate the femur outwards and those which rotate it inwards.
6. Describe the fascia transversalis.

The following were the questions on Physiology, to be answered between 4 and 6 o'clock:—

1. What is the composition of the blood? State the uses of its various constituents.
2. Classify food-stuffs in the order of their value as heat-producers. Give your reasons for the order in which you place them.
3. Describe the structure of lymphoid tissue, and state where it occurs.
4. Describe the act of deglutition.
5. Explain the mechanism of ordinary inspiration and expiration.
6. Describe the formation and uses of the placenta.

Mr. Orchard (Kingussie).—We do not think it advisable to open a discussion of the subject.

"A SIMPLE OPERATION FOR VARICOCELE."

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 30th, 1882, there appeared a description of the above, by Mr. Barker, Assistant Professor of Clinical Surgery and Assistant-Surgeon to University College Hospital, from which one can only infer that the writer was the originator of the useful operation there described. That he was not the originator the following facts will, I believe, show.

Mr. T. M. Girdlestone, F.R.C.S., who is the Lecturer on Surgery at the Melbourne University, and is also an Assistant-Surgeon to the Melbourne Hospital, has practised an almost identical operation for the last ten years with unvarying success. His operation, however, differs from Mr. Barker's in two particulars, which are—(1) that he uses carbolised kangaroo tendon as his ligature instead of the carbolised silk recommended by Mr. Barker; (2) that he does not adopt Listerian precautions, but simply seals the slight wound made by the needle with compound tincture of benzoin. Carbolised kangaroo tendon makes a very strong ligature, which never slips, and remains unabsorbed for a sufficient length of time. Mr. Girdlestone has been able to show frequently that, not only does carbolised kangaroo tendon remain in the human body as an innocuous material when used for any purposes of ligature, but that it is completely absorbed after a slight lapse of time. Curiously enough, only recently there was another demonstration of this fact afforded by a post-mortem examination of the state of such a ligature in the case of a patient who died of heart disease three months after his brachial artery had been ligatured with this material on account of an aneurism at its bifurcation. At this examination no trace whatever of the ligature could be discovered, although the artery was occluded at this point, and almost obliterated below it. Mr. Girdlestone has found that in his operation for varicocele this form of ligature causes but slight irritation and no suppuration whatever, and, further, becomes completely absorbed. He has already referred to its uses for surgical purposes in a letter written to Mr. Smith of St. Bartholomew's Hospital, in which he mentioned incidentally its use in this operation. His account of its uses appeared in the published Transactions of the Medico-Chirurgical Society for 1881 or 1882. A paper was also read by him before the Australian Medical Society, in which he described the operation, and made reference to numerous successful cases, including amongst the latter two medical students on whom he had operated in 1878 and 1879, and who can therefore bear personal testimony to its efficacy. This paper was published under the heading of the Reports of the Society's Proceedings in the *Australian Medical Journal* of December 15th, 1879, and appears in that issue at page 574. In conclusion, I must ask Mr. Barker to pardon me for so correcting him.

I remain, Sir, faithfully yours,

JAMES W. BARRETT, M.B., Ch.B.,
Resident Surgeon to the Melbourne Hospital.

Melbourne Hospital, Jan. 30th, 1883.

GALL-STONES.

To the Editor of THE LANCET.

SIR,—Can any of your readers help a poor country doctor? I have a patient who frequently passes gall-stones—sometimes once in two months, sometimes oftener. Can anything be done to prevent their formation—dietetic, medicinal, or otherwise?

I am, Sir, yours truly,

April 2nd, 1883. GALL-STONE.

CANAL BOATS AND SMALL-POX.

As another proof, if such be needed, of the necessity for legislation in connexion with the dwellers on canal boats, so persistently and ably advocated by Mr. George Smith of Coalville, the following communication from a correspondent at Great Berkhampstead to the *Bucks Herald* may be adduced:—"During the last few weeks two registered canal boats have been conveying small-pox to different parts of the country. In one case a boatwomen with two children were left at Leighton suffering from this terrible disease, and the boat continued its course; and subsequently another child suffering from the same malady was put off and sent to Leicester. A few days later the doctor pronounced another child in the cabin to be ill of the same complaint, but the boat continued its journey. In the other case two children were left at Berkhampstead ill of small-pox, and the boat, with two children in the cabin, moved forward into Staffordshire."

A Competitor.—No award has yet been made for either the Collegial-Triennial or Jacksonian Prizes of the Royal College of Surgeons. Members of the Council are not allowed to compete.

J. W. M.—The circumstance has been frequently referred to in our columns.

Dr. Mercier (Paris).—We cannot exchange.

M. A. Proctor should apply to his ordinary medical attendant.

"PERSISTENT HICCOUGH."

To the Editor of THE LANCET.

SIR,—I am "M.D.," who wrote to you on the above subject in January, and whose letter appeared in THE LANCET of February 24th. In the first place I beg to thank the several members of the profession who kindly, in your columns, volunteered advice in the treatment of this troublesome and trying case. All the remedies suggested by your correspondents, excepting mustard-seed and nitrite of amyl, had been tried by me prior to the case appearing in THE LANCET.

My patient died on March 13th, worn out and exhausted, but otherwise to the last free from an ache or pain, and, with the exception of increased dulness over the posterior portion of the left lung, the symptoms remained almost stationary from the first. When I was called in to see Mr. S——, on the 18th of December, 1882, I found that it was evidently a case of broncho-pneumonia, complicated with hiccough, the latter arising from some unexplained cause. He told me that he had had hiccough more or less since the previous July. He was seen a few days later in consultation, and, although the hiccough was very troublesome, our efforts were chiefly directed to the bronchitis, looking upon the former as a troublesome complication which would soon subside. It did not, however, subside, but went steadily on to the day of his death. On the 1st of January he was again seen in consultation, and the hiccough was so violent and exhausting that our treatment was somewhat reversed by the remedies for hiccough being brought to the front. It, however, never left him. He was conscious save an occasional rambling up to a few hours of his death, and from a state of great mental excitement and anxiety he became perfectly calm and resigned. He slept but very little, and at prolonged intervals, during the whole of his illness, never more than two hours at a time, and was often for days without any sleep. Morphia, chloral, bromide of potassium, ether, &c., only seemed to excite the brain almost to frenzy. The only remedy that did any good in my case was chloroform. I gave it in ten to twenty drops on sugar. I injected it hypodermically with and without atropia, and my patient inhaled it frequently in twenty to thirty drop doses. Some days before the end the patient would occasionally with great difficulty raise some thick, very offensive, pus-like matter, streaked with blood.

On March 14th I made a post-mortem examination. The right lung was much enlarged, and filled not only its proper position, but also extended into the left side of the chest, and so peculiar was the formation that the gentleman who assisted me, at the first glance, exclaimed that there was only one lung. The left lung was so collapsed and solid, like liver, and lying so closely at the posterior part of the chest, that it was completely out of sight. In the right lung there was evidence of diffused bronchitis, and on removing the heart and left lung I became aware of a large mass of scirrhus at the root of the latter, in which were embedded the pulmonary veins and artery, the veins being partially filled up with masses of scirrhus, and the artery compressed and much smaller than usual. The lung itself was small, hard, and hepatised, but had no scirrhus formation in it. On cutting it across, a dark offensive matter oozed out, and the inner portion was evidently in the early stage of gangrene, being soft, dark in colour, and highly offensive. The heart was healthy, as were all the other organs; but on the upper and left side of the diaphragm was a patch about three inches in diameter, rough and hard, covered with millet-seed looking bodies. There were also two small bodies on the anterior portion of the liver. The scirrhous tumour would be fairly represented by a medium sized orange somewhat flattened at each side, and was no doubt the cause of hiccough either by direct irritation of the phrenic nerve or by reflex action of this nerve through the vagus, the latter more probable than the former, for although the mass was in the direct line of both propositions, yet the phrenic may possibly have escaped by being pushed aside, but the vagus must have suffered from the pressure of such a growth. I must leave it to a better pathologist than myself to say how long such a tumour would take to form.

I am, Sir, yours truly,

Beckenham, March 27th, 1883. JAMES WEAVER, M.D.

OUR attention has been called to a paragraph in the *Sunday Times* for April 1st, written ostensibly in answer to a correspondent, lauding the method adopted by an eminent London obstetric physician for the treatment of hysteria. We suppose we must credit the writer of the paragraph with ignorance of the injury inflicted on a medical practitioner by such injudicious praise.

Dr. James Shimmin.—The English College of Surgeons, and probably other bodies, would recognise the courses and certificates of study, but they would require our correspondent to pass their examination.

Parmesan.—There is the well-known case in the College, but there are very few cases on record. Our correspondent might look up the Indices of Schmidt's and Canstatt's Jahrbücher.

Mac.—Of course no feeling of the kind imputed existed in the mind of the writer of the notice.

P. J. H.—The report appeared in our last issue.

APHASIA.

To the Editor of THE LANCET.

SIR,—Cases of aphasia uncomplicated with hemiplegia or loss of power or sensation in any part of the body are so rare that I think a few particulars regarding a patient thus affected may interest some of your readers. At a meeting of the Clinical Society of London, November 24th, 1871 (THE LANCET), Dr. Moxon is reported to have said "that aphasia meant that state in which words are forgotten and cannot be used when repeated to them." Very concisely this expresses the condition of my patients. The latter part of the definition holds good if a little time elapses between the moment at which a noun substantive is given and the time at which it is again asked to be repeated. If my patient is told the name of a neighbouring farmer well known to him he readily forgets it. Nevertheless, this man knows the names of many things; watch, knife, purse, &c.; moreover, he can read with ease, and can write anything if the matter to be written is placed before him.

The history of the case is briefly as follows: On the 3rd inst. about 6 A.M., my patient, a strong and healthy farmer, before leaving his bed conversed about his plans for the day as freely and intelligently as formerly, and apparently, so far as his wife could judge, enjoyed perfect health. His wife informed me that she noticed nothing unusual about him until he allowed the utensil to fall on the floor on first getting out of bed. He again lay down and seemed to be a little "wrong with his words." I saw him at 8 A.M. and found him aphasic. A few questions elicited the facts that on the night previous he had two glasses of whisky and water, that he felt quite well, but that his bowels had not moved for two days. The heart sounds were normal, and the urine contained no albumen. I have no suspicion whatever of syphilis, and he never suffered from rheumatism. He is withal a temperate man in the prime of life. Twelve days after seizure I find little or no change in his condition beyond a more intelligent and lively expression of countenance. He enjoys the company of his children and their conversation, and heartily laughs at his own condition. On attempting to join in the conversation he breaks down and fails to command the words necessary to convey his ideas. Clearly enough the thoughts or ideas which lead to verbal expression are present with him, but he cannot give utterance to them. I think I am justified in calling this case an uncomplicated one. True, he committed a mistake which under ordinary circumstances would not have occurred, but he could always walk steadily and firmly grasp with his right hand.

The treatment, I may add, consisted in free purgation, the liberal application of leeches to the left forehead, and the internal use of iodide of potassium. Dr. Glover (THE LANCET, December 16th, 1871), described a similar case in a man aged sixty-three, and as in his case, so in this, there is no symptom which indicates any affection of the left hemisphere more than the right.

I am, Sir, yours truly,

Jan. 15th, 1883. R. M'K.

Mr. R. Hughes.—Maudsley's Gulstonian Lectures; Dr. D. H. Tuke's Illustrations of the Influence of the Mind upon the Body in Health and Disease.

April.—The Bill can be bought of Messrs. Spottiswoode and Co. The Bill does not deal directly with the question of assistants. The time is not fixed.

Mr. W. Hempson Denham.—The report may be obtained of Wyman and Son, Great Queen-street.

A Sufferer may consult the Medical Directory.

J. T.—Berlin Klin. Wochenschrift; Deutsche Med. Wochenschrift.

TRANSFERENCE OF NERVE-FORCE.

To the Editor of THE LANCET.

SIR,—I am very anxious to know if it is altogether a popular error that in the case of two people—say sisters, servants, or married people—sleeping constantly in the same bed, one can, and does, derive nerve-force, or its congener, electricity, from the other?

I am, Sir, faithfully yours,

April 2nd, 1883. DELTA.

*** We do not know of any evidence tending to demonstrate such an action as that to which our correspondent refers, nor do we think it at all likely that any influence of the kind exists; but "there are more things in heaven and earth than are dreamt of in our philosophy."—ED. L.

Mr. P.—We do not see our way clear to accepting Mr. P.'s view of this case or to approving his part of the correspondence. The discrepancy between the account of Mr. S. as to the feeling of the friends and that of the friends themselves is unfortunate. There is a want of truth somewhere, and we prefer to believe that it is on the side of the friends, and not of the medical man. Besides, we cannot approve Mr. P.'s conduct in leaving the message he himself describes for Mr. S. To disparage a brother practitioner's qualifications and his conduct at the very outset of a quarrel—and that before the ignorant—is scarcely to be justified.

Mr. Mennell.—The advertisement on the plate is objectionable, and apt to lead to abuse. It is objectionable as an advertisement. Our correspondent would do well, if he continue a system of gratuitous advice, to do it with much care, and to remove the intimation from the outside of his house.

AUTHOR WANTED.

To the Editor of THE LANCET.

SIR,—A few days ago I got here a letter from the Secretary of the Instituto Medico Valenciano, Spain, stating that he had received an essay with the title "Are Diseases of the Heart, Phthisis, and Insanity more frequent at present, &c.?" and that an honour had been awarded this essay, but the author had omitted to enclose his name and address. He therefore asked me to make this public. I hope you will kindly insert this in your next issue, and if any author who has competed will forward me his motto, I will advise him (if he be the successful candidate) to whom to apply for the prize.—I am, Sir, yours truly,

17, Rodney-street, Liverpool, April 2nd, 1883. P. M. BRAIDWOOD.

M.D., M.R.C.S., L.S.A.—We refer our correspondent to articles and letters on the subject contained in the following numbers of THE LANCET:—Sept. 1st, Nov. 10th, 1877; May 18th and 25th, June 15th, August 3rd, Oct. 5th and 26th, Nov. 9th, 1878.

GONORRHŒA TREATED BY BELLADONNA.

To the Editor of THE LANCET.

SIR,—Having successfully treated a few cases of gonorrhœa by smearing the penis with ointment of belladonna and enveloping it in a cloth smeared with the same, I beg to suggest the treatment to those who have opportunities of testing its efficacy. The cases in which it was tried were mild; no injections were used nor internal medicines employed, and the cure was complete in a week.

I am, Sir, your obedient servant,

Venezuela, Tucácas, March 5th, 1883. J. NUMA RAT, M.R.C.S.E.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir E. Lechmere, London; Sir Joseph Fayrer, London; Mr. Dyer, Bath; Dr. Seymour J. Sharkey, London; Mr. Spencer Wells, London; Mr. Bland, Colchester; Mr. Lund, Manchester; Mr. Blakeney, Boyle; Mr. Emil Bruck; Mr. Thos. Laffan, Cashel; Mr. Gresswell, Highfield; Mr. Harbie, London; Mr. Hancock, Hendon; Mr. Makuna, London; Mr. Joseph Taylor, Buxton; Dr. Reynolds, London; Dr. Charteris, Glasgow; Mr. Hudson, Leeds; Mr. S. Scott, Shrewsbury; Mr. Niven, Didsbury; Mr. F. Vacher, Birkenhead; Mr. Meybridge, New York; Dr. Dearden, Church; Mr. Denham, Southsea; Dr. Wilkins, Montreal; Mr. Edmund Owen, London; Mr. Leonard Williams; Mr. Palmer, Newbury; Mr. Farrer, Brighouse; Mr. Marsh, London; Mr. Hobson, London; Dr. Hardwicke, Sheffield; Dr. Carter, Bath; Dr. Weatherly, Portishead; Mr. Moore, Hazelgrove; Mr. Numa Rât, Venezuela; Dr. Macpherson, Glasgow; Mr. Angus Mackintosh; Dr. M. Hay, Edinburgh; Dr. J. E. Pollock, London; Mr. Bernard Pitts, London; Mr. Malins, Birmingham; Mr. Hoole, London; Dr. Saunders, Crail; Mr. Williams, Liverpool; Mr. M'Can, Portglenone; Mr. Trenerry, Bristol; Mr. Orchard, Kingussie; Mr. Crosland, Batley; Mr. Parker, Texas; Mr. Bagshaw, Salford; Dr. Buchanan, Glasgow; Mr. Lister, Baldock; Messrs. Robertson and Scott, Edinburgh; Dr. J. Edmunds, London; Messrs. Cox Brothers, Williton; Mr. Van Praag, London; Messrs. Merritt and Hatcher, London; Messrs. Christy and Co., London; Mr. Davies, Bath; Mrs. Pratt, Cardiff; Mr. Jones, York; Miss Hogston, Newcastle-on-Tyne; Mr. Lloyd, London; Mr. Butler, Farringdon; Mr. Lemon, Polton; Mr. Blackhouse, Jersey; Mrs. Rust, Glasgow; Messrs. Fannin and Co., Dublin; Mr. Mackenzie, Carlisle; Dr. Battersby, Ceylon; Mr. L. E. Wright, London; Messrs. Lee and Martin, Birmingham; Mr. Laurie, Glasgow; Mr. Hewetson, Leeds; Mr. Rayner, Ipswich; Mr. Lindford, London; Mr. Forbes, Blairerno; Mr. Cox, Ross; Mr. Dolan, Halifax; Mr. Burke, Hammersmith; Mr. Willan, Leicester; Dr. Popham, Edinburgh; Dr. Hall, Howe; Mr. Browne; Mr. Moose; Dr. Fisher, Brighton; Dr. Boyce, Pril; Mr. J. Cooke, London; Mr. Bryan; Messrs. Smith and Son, Manchester; Mr. Robinson, Margate; Messrs. Kegan Paul and Co.; Messrs. Smith and Elder, London; Mr. Orridge, London; Dr. Royle, Jersey; Mr. Johnson, London; Messrs. A. and J. Warren, Bristol; Rev. R. W. Hiley; Dr. A. B. Squire, London; Mr. Andrews, London; Mr. Neve, Edinburgh; Mr. J. S. Wood, London; Dr. Hitchcock, Oxford; Mr. Loane, London; Mr. S. Owen, London; Messrs. Calvert and Co.; Dr. Foote, Rotherham; Mr. Michael, London; Mr. Leach, London; Mr. Michael, London; Dr. Mercier, Paris; Mr. Greenish, London; Mr. Tallack, London; Mr. Crosse, Norwich; Mr. Robertson, Manchester; Mr. Phillips, Southend; Dr. Peter Bell, Edinburgh; Mr. Wickham Barnes, London; Mr. Browne; Tantalus; F.R.S.; Max; Medicus, Bradford; M.D., Clapham Junction; X.; M. S.; Medicus, Brighton; H.; M.D., Luddenden; W. A. P.; Mac; April; M.D., M.R.C.S., L.S.A.; J. W. M.; A General Practitioner; Medicus; Necessitas non Legesh abeat; An Old Subscriber; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hall, Beverley; Mr. Morris, Campden; Mr. Ganith, London; Dr. Taylor, Chepstow; Mr. Camberbatch, London; Mr. Toller, Barostaple; Mr. Allsop, Shipley; Mr. Ainstie, Black Shields; Dr. Anderson, Seaton Delaval; Mr. Kay, Cheltenham; Mr. Brown, West Bromwich; Mr. Bowen, Liverpool; Mr. Raines, Ipswich; Dr. Somerville, Chesterfield; Miss Walker, Liverpool; Dr. Shimmin, Liverpool; Mr. Bartlett, Sarratt; Mr. Knightsleigh; Mr. Hodgkinson, London; Dr. Shoemaker, Philadelphia; Mr. Laird, Gunnersbury; Dr. Tylecoat, Sandon; Dr. Totherick; Mrs. Wright, London; Mr. Bellingham, Dudley; Mr. Williams, Northampton; Mr. Aslett, Newark-on-Trent; Miss Macdonald, Penzance; Mr. Clay, Edinburgh; Mr. Mackenzie, Carlisle; Dr. Masters, Hednesford; Mr. Merton, London; Mr. Rigby, Great Ayton; Messrs. Statham and Co., Manchester; Mr. Jefferson, York; Mr. Willan, Leicester; Mr. Woods, Birchinton; Mr. Davies, Bath; Mr. Dreylar, London; H. B., Bournemouth; Morphia; Medicus, Barnsley; Alpha; Matron, Oldham; Glasgow, Hanley; B.; J. J. H., Skipton; M.R.C.S., Eastbourne; M. H., Bath; Y.; L. M., Richmond; Medicus, Minchinhampton; L. M., Southsea; Medicus, Darlington; Alpha, Bishop Auckland; W. B., Farringdon; Cantab, Finsbury; Bryant, Leeds; J. W., Burton-on-Trent; X. Y. Z.; L. M., Cheetham; J. H., Camberwell; Delta; Dispenser, London; W. W.; E., Doncaster; D. D.; D. E. F., Blackwater; S. W.; W. O. D., Hanley; Alpha; R. J.; Assistant, Easingwold; F. H., Lewisham; L.L.D., New Southgate; Alpha, Holloway; Medical, Newcastle; A. P. D.; &c., &c.

Roscommon Herald, Country Brewers' Gazette, La Science Nouvelle, Somerset and Wilts Journal, Italian Times, Liverpool Courier, Leeds Mercury, Yorkshire Post, Cork Constitution, Philanthropist, Liverpool Mercury, Bath Evening Chronicle, &c., have been received.

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